

AMERICAN RAILROAD JOURNAL,

IRON MANUFACTURER'S AND MINING GAZETTE.

ESTABLISHED 1831.

PUBLISHED WEEKLY, AT No. 48 SOUTH THIRD STREET, PHILADELPHIA, AT FIVE DOLLARS A YEAR IN ADVANCE.

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PUBLISHED AT 48 S. THIRD ST., PHILADELPHIA.

Saturday, October 28, 1848.

REMOVAL.

The Office of this Journal is removed from the Franklin House, to No. 48 South Third Street, third door north of the Girard Bank.

A special request is hereby made, to those to whom Circulars have been recently addressed, that they will respond promptly to them, as an important question—to us at least—is to be decided in accordance with the response given to the request made in those circulars.

RAILROAD IRON.

THE NEW JERSEY RAILROAD & TRANSPORTATION CO. have for sale from 450 to 500 tons of Iron Rails, weighing from 35 to 37 lbs. per yard, of the T pattern, recently taken up from their road to give place to a heavier rail, together with Chairs and Spikes to correspond, which they will sell cheap for cash; the rails have been straightened and prepared for re-laying, and are now ready for delivery on the dock at Jersey City. Apply at 57 Merchants Exchange,

August 23, 1848.—31* New York.

RAILROAD IRON.

THE NEW JERSEY IRON CO.'S WORKS, at Trenton, are now in full operation, and can execute orders for Railroad Bars of any required pattern, equal in quality to any made in this country. Apply to DUDLEY B. FULLER, Ag't

139 Greenwich Street.
New York, October 25, 1848.

Fifth Line between New York and Philadelphia.

We give the annexed advertisement a conspicuous place in the Journal from gratitude alone—and will continue it a year without charge, if the managers will make the hour 7 A. M. and two years, if they will apply these terms to the 9 A. M. and 4 P. M. trains.

NEW YORK & PHILADELPHIA.

NEW JERSEY RAILROAD & TRANSPORTATION CO.

6 O'CLOCK, A. M.
Accommodation Line from New York to Philadelphia, via Jersey City, New Brunswick, and Camden.

Fare for 1st class cars, \$3; for 2d class, \$2.50; children under 12 years, half price.

Leaving every morning, (Sundays excepted) at 6 o'clock, from foot of Courtlandt street, and passing through Newark, Elizabethtown, Rahway, New Brunswick, Kingston, Princeton, Trenton, Bordentown, Burlington and Camden, and arriving at Philadelphia at 11 A. M.

Leave New York 6 o'clock A. M.; Newark, 6h. 30m.; Elizabethtown 6h. 40m.; Rahway, 7 A. M.

DAILY EXCURSION TO PHILADELPHIA.

Excursion Tickets will be furnished, entitling the passengers to return by the 4 o'clock P. M. Mail Line the same day, or next morning by the 6 o'clock A. M. Mail Line, for FIVE DOLLARS.

Railroads in Maine.

The article in to-day's issue, on the Railroad Enterprises in Maine, is more full than any account before published. We had hoped to have been able to furnish, in addition to our own article on the subject, one of much more interest, from the pen of a gentleman of that State, who is familiar with its wants and resources, and who has been one of the most efficient actors in the great enterprise now progressing in the direction of Montreal—from which the city of Portland is to derive so much advantage. We expect a series of articles from the same pen, which will display the advantages of railroads to Maine, in connection with their general influence on the destinies of the country, which will be highly interesting to the readers of the Journal elsewhere, as well as in that State. Maine has adopted a railroad system of her own, in some respects peculiar—which bids fair to produce important results, by the application of scientific foresight to the admitted truths which experience has elsewhere demonstrated. Our plan is to extend the knowledge of railway improvements in various parts, and supply full details

of them in the different States, with a view to a comprehensive regard to the railway interests of the whole country. Maine, from her geographical position, must be regarded as an important field of railway enterprise.

New York and Philadelphia Railroads.

We perceive, by the Advertisement of the New Jersey Railroad Company, whose line extends from Jersey City to a short distance beyond New Brunswick, that another train is now run, between New York and Philadelphia, over that line, at six in the morning, at three dollars. This is an improvement, but upon a small scale, as very few people find it convenient, and many quite impossible, to go at that hour. There is one feature, however, in this new arrangement which is important—and for which we desire to thank those who suggested it, and also those who adopted it—and that is, the excursion ticket from city to city and back, at \$5; which allows the party to return same day, in the 4 P. M. line, or by next morning 6 o'clock line. This will be a great convenience to many business men—and, even though still too high, by at least a dollar, as may be shown by the low fares, and increasing business, and net profits of the railroads from Boston, yet it is a concession to public opinion, as expressed partially through the press, for which we are grateful, and again return thanks to those who have yielded so much. And, as we know of no way by which we can more fully impress them with our gratitude for their concession to the public, and their appreciation of the influence of an independent press—even though but few in number have yet spoken out decidedly in the matter—than by assuring them we are greatly encouraged to continue our investigations, and explanations, and comparisons of their operations, as compared with other successful roads, costing as much per mile, and having not half the population dependent upon them for a medium of business and pressure travel. If a little light has produced so much good—a continuation, and an increase, of that important medium will be very likely to enable the gentlemen who control the whole business to take another step in the right direction, and then another, until they come up with the age in which they live.

It is but just that we should say that our remarks on this subject apply particularly to the managers of the Camden and Amboy line, who have the power to dictate terms to the New Jersey company, as they could turn a large portion of the travel which now

passes through New Brunswick, by the way of Albany—or they could run their steamboats up to New Brunswick, and thus take, not only a large portion of the passengers who come on in their cars, but also compete successfully for the New Brunswick passengers, by which the New Jersey company would lose much of their through business—therefore they are not as independent as they ought to be, and would be, if they controlled the road through to Philadelphia.

But we would again return thanks for the benefits rendered—desiring to say that if they will make it 7 o'clock, instead of 6—or even apply the terms of this line to the 9 A. M. line—we will dispense with the fifth line altogether for the present, and be doubly indebted, and encouraged to labor on to the end.

New York Canals.

Who that recollects the origin and history of these noble works, and advocated their construction—and recollects the doubts of the candid and honest—the ridicule of the politician and the demagogue who sought to ride into place, and power, by opposing what the people did not appreciate, and therefore doubted the policy of undertaking—does not feel a glow of pleasure when he reflects upon the amount of prosperity which they have produced to the people at large—not only in New York, but in all the west, and in all the Union? Well may those who devoted their time, their talents and their means to the commencement of these works, feel proud of their forecast and their labors, because they have produced so much good to others—so much more to others than to themselves.

The business of the present year has not been equal to that of 1847, which was very much beyond any previous year.

The following shows the comparative tolls during September 1847 and 1848—and for the season to Sept. 30th, as follows:

	1847.	1848.
Erie canal.....	\$410,167 88	\$478,974 56
Champlain.....	16,139 12	15,387 62
Oswego.....	10,521 50	11,338 24
Cayuga and Seneca.....	4,432 16	4,628 70
Chemung.....	2,751 55	2,084 03
Crooked lane.....	300 61	345 70
Chenango.....	4,075 06	4,217 45
Genesee Valley.....	3,233 31	3,657 42
Oneida Lake.....	89 31	137 81
Oneida River improvement.....	22 95	32 07
Seneca R. towing path.....	33 54	49 82
Totals.....	451,756 99	520,853 42

The increase in the month of September this year over the corresponding month of last year is \$69,096 43.

The total amount of tolls received this year, from the opening of navigation to the close of Sept., five months, is.....2,177,837 68

Do. for last year.....2,667,256 06

Decrease.....489,418 38

Tolls for 1st week in October, 1847.....121,537 60

1848.....128,241 78

Increase.....6,804 18

It is very probable that the decrease will be much less at the close of navigation. There has been a fair increase every week for the past month; and as there are about nine weeks more of navigation on the canals, there is a chance for a considerable increase, compared with the corresponding weeks in 1847.

Report of the Tonawanda Railroad Co.

The Tonawanda Railroad Company, in compliance with a resolution of the honorable the Assembly, passed February 2, 1843, submit the following report:

The length of their road is estimated to be 43½ miles.

The cost of construction of their road is as follows:

Amount charged to the account up to

January 1, 1847.....\$753,555 19

Expended for construction in 1847..... 51,975 21

805,530 40

Income from all sources during 1847:

From passengers.....155,993 48

freight..... 27,684 16

mails..... 6,368 75

storage..... 2,869 70

interest received..... 504 95

engine and cars sold..... 1,339 33

194,751 36

Number of through and way passengers:

Through passengers.....98,999½ paying 135,168 33

Way passengers.....35,068½ " 22,569 91

Extra train on 4th July..... 452 45

134,068 135,190 69

Expense for construction, for repairs, running the road, etc.

Paid for construction in 1847.....51,975 21

repairs and running the road.....55,718 90

purchase of debts of the company.....20,700 00

interest and sinking fund on loan

of State credit..... 7,027 61

135,421 72

The amount of dividends paid 1st July,

1847, and 1st January, 1848..... 57,000 00

Number of locomotives, cars, etc., owned by the company.

6 locomotives.

58 wheel passenger cars.

34 wheel " " "

A joint interest with other companies in mail and baggage cars, equal to,

4 mail baggage cars.

28 8-wheel freight cars.

25 4-wheel " " "

2 wagons.

1 engine house.

1 machine shop.

1 carpenter shop.

1 horse.

The average number of men employed by this company in 1847 was.....99

The number of miles run by passenger trains was.....77,354

The number of miles run by freight trains..... 14,500

L. Brooks, Treasurer.

Railroad Enterprises in Maine.

Few people out of the State of Maine, have any idea of the extent of railroads, authorised to be constructed in that State. Although somewhat watchful of the progress of such matters, we were not aware that over six hundred and fifty miles had been chartered by the legislature of Maine, until we obtained the following list, of the different lines, when at Portland, a short time since, from a gentleman who has been a main spring in the movement on this subject, within the State during the past few years.

Of these twenty main lines and branches, the "Bangor and Oldtown" road, of 12 miles in length, was first chartered, and first put into use, at a cost, as we infer, of about \$350,000—that being the capital authorised; and few roads at that day were built for less than their estimates. Of the success and present condition of this road, we are not apprised, and shall therefore be obliged to any gentlemen who will furnish us with a statement showing its past

and present doings and future prospects. In 1836 three other roads were chartered, viz: the Kennebec and Portland, from Augusta to Portland, 61 miles, with a capital of \$1,600,000; the Boston and Maine, from South Berwick to N. Hampshire line, 3 miles; and the Machias-port road, of 8 miles, to Whitneyville, with a capital of \$100,000. In 1837 the Portland, Saco and Portsmouth road, of 51 miles, was chartered, and completed, in connection with the Eastern road, from Boston to Portsmouth, and in connection with the Boston and Maine road, by which two lines were opened between Boston and Berwick, and one from thence to Portland. This fifty-one miles cost \$1,250,000.

The Kennebec and Portland road was not, we believe, commenced until recently, or about two years since—its charter having been renewed in 1845; at about which time a new impulse was given to the railroad interest in Maine by the agitation of the subject of that bold and noble enterprise of a railroad to Montreal. In former days, 1840 to 1845, we were often led to wonder why it was that the States of Maine, New Hampshire and Vermont, were content to do without railroads, when Massachusetts, Connecticut and Rhode Island were deriving such benefits from them. Their delay proved, however, only a period of inquiry and observation—to be sure they were right before they embarked in an enterprise requiring so much capital; and 1845 and 1846 was a period of decision, and commencement in those three States; and especially in Maine. The Atlantic and St. Lawrence road, of 150 miles, and two other roads, of 54 miles each, from the Atlantic road at Danville to Waterville, and from Waterville to Bangor, were chartered in addition to the renewal of the charter from Augusta to Portland of 61 miles—making 310 miles chartered and re-chartered in one year; and these three roads have been commenced with spirit, and upon two of them 40 or 50 miles will be in operation this fall.

To Portland the completion of these three roads is of immense importance—more especially the road to Montreal—by which an opening will be made to the St. Lawrence and the great lakes.

With a harbor almost equal to any other on the Atlantic coast, Portland is, comparatively, a small place; and this results mainly from want of easy communication with the interior and grain-growing regions; but let the railroad be completed to Canada line, and thence to Montreal, by which the northern parts of New Hampshire and Vermont, and the most fertile region of the lower province of Canada may reach a seaport easier than to go to Boston; and also complete the other roads to, and through the valley of the Kennebec, and Portland must advance at a rapid pace, until she assumes a population and importance which will surprise her own most intelligent citizens, as well as astonish her neighbors—some of whom smile when they hear their Portland friends speak of their coming importance. So smiled many intelligent men in New York, in the early progress of the Erie canal—yet it was completed, and has accomplished ten-fold more than its most sanguine friends predicted. So smiled some of the wise men of Massachusetts, in relation to the proposal to construct the Western railroad—yet it has been completed, and who can, even now, estimate its value to the old Bay State, not only in what is done upon its own line, but also, and especially, in the impulse which its success has given to the railroad interest in New England, New York, and all the west. So will it be in Maine; and especially in Portland, the point of convergence of most of the important lines in that State.

We are not now able, as we hope soon to be, to give a more full view of the different lines, and their prospects, and prospective advantages to the people. We shall recur again, and often, to the subject, and shall be obliged to any gentleman residing in Maine, familiar with the subject, to give us facts and statistics.

LIST OF RAILROADS CHARTERED IN MAINE.

NAME	FROM	TO	Incorporated	Authorized capital	Length, Miles	When finished	Weight per yd.	Cost
Atlantic and St. Lawrence	Portland to Canada line—there to connect with the St. L. & A. R. R., and form one continuous line from Portland to Montreal.		1845	3,000,000	150			
Buckfield branch	Mechanic Falls, on the line of the A. & St. L. R. R., to Buckfield.		1847	200,000	13			
Androscoggin and Kennebec	Danville, on the line of the A. & St. L. R. R., to Waterville.		1845	1,000,000	54			
Penobscot and Kennebec	Bangor, on the line of the A. & St. L. R. R., to Waterville.		1845	1,000,000	54			
Portland, Saco and Portsmouth	Portland, New Hampshire line.		1845	1,000,000	54			
Boston and Maine	Bangor, on the line of the A. & St. L. R. R., to Waterville.		1845	1,000,000	54			
Kennebec and Portland	Bangor, on the line of the A. & St. L. R. R., to Waterville.		1845	1,000,000	54			
Bath branch	Bangor, on the line of the A. & St. L. R. R., to Waterville.		1845	1,000,000	54			
Great Falls and South Berwick branch	Bangor, on the line of the A. & St. L. R. R., to Waterville.		1845	1,000,000	54			
York and Cumberland	Bangor, on the line of the A. & St. L. R. R., to Waterville.		1845	1,000,000	54			
Bangor and Piscataquis canal & R. R. Co.	Bangor, on the line of the A. & St. L. R. R., to Waterville.		1845	1,000,000	54			
Belfast and Waterville	Bangor, on the line of the A. & St. L. R. R., to Waterville.		1845	1,000,000	54			
Franklin and Kennebec	Bangor, on the line of the A. & St. L. R. R., to Waterville.		1845	1,000,000	54			
Somerset and Kennebec	Bangor, on the line of the A. & St. L. R. R., to Waterville.		1845	1,000,000	54			
Androscoggin	Bangor, on the line of the A. & St. L. R. R., to Waterville.		1845	1,000,000	54			
Leviathan and Topsham	Bangor, on the line of the A. & St. L. R. R., to Waterville.		1845	1,000,000	54			
Machiasport	Bangor, on the line of the A. & St. L. R. R., to Waterville.		1845	1,000,000	54			
Cathis and Milltown	Bangor, on the line of the A. & St. L. R. R., to Waterville.		1845	1,000,000	54			
South Thomaston	Bangor, on the line of the A. & St. L. R. R., to Waterville.		1845	1,000,000	54			

Baltimore and Ohio Railroad.

The Report of the Baltimore and Ohio Railroad Company—which we have not yet seen—for the year ending the 30th September, 1848, has just been presented to the stockholders. The receipts and expenditures for that year were as annexed:

Received for the transportation of passengers, mails, and merchandise.....\$1,182,942 58
Due by the postoffice department and individuals.....30,721 99

Making together.....1,213,664 57

Expenses for working the road and machinery, and keeping them in repair, viz:

Expenses of transportation.....\$219,962 46
Repairs of road.....167,365 05
" locomotives.....62,368 52
" passenger cars.....26,491 07
" burden cars.....74,614 10
" bridges.....59,509 18
" depots.....14,990 85
" water stations.....3,946 83

Watching bridges and pumping water at water stations.....12,012 35

Losses by accidents, fire, etc.....4,022 61

Office and incidental expenses, including salaries, fees to counsel, house-rent, etc.....16,603 74

Stationery, machinery and shops.....219 74

Making an aggregate of expenses of.....662,106 50

And showing the net earnings of the road for the last year to be \$551,558 07.

It appears that the gross income from the main stem, for the year ending Sept. 30th, 1848, has been \$1,213,664 57; the total expenditure properly chargeable thereto, 662,106 50; and the net revenue, 551,558 07; showing an increase over the preceding year of 111,727 99 in the gross income; 71,277 52 in the expenditure, and 40,450 47 in the net revenue.

Washington Branch Railroad.

The receipts on this road for the year ending September 30th, 1848, were for passengers, merchandise and mails.....\$250,875 42

Due by the postoffice department and individuals.....4,289 31

255,164 73

The expenditures during the same period have been as follows, viz:

For bonus to the State, one-fifth of the receipts from passengers.....45,884 78

Expenses of transportation.....27,365 89

Repairs of the road.....25,909 61

" passenger cars.....8,107 91

" burden cars.....5,991 25

" locomotives.....6,431 99

" bridges.....7,025 93

" depots.....306 12

" water stations.....225 66

Eldridge Landing annuity.....1,250 00

Washington property.....945 61

Miscellaneous improvements.....2,881 23

Watching bridges.....614 00

Losses by accidents.....75 70

Passenger cars.....1,710 00

Office and incidental expenses, including salaries, house rent, etc.....8,999 60

Making an aggregate of expenses of.....143,524 97

And showing the net earnings for the year to be.....111,639 76

It appears that the gross income from the Washington road, for the year ending 30th September,

1848, has been \$255,164 73; the total expenditures, properly chargeable thereto, 143,524 97; and the net revenue, 111,639 76; showing an increase over the preceding year of 36,746 42 in the gross income; 14,714 22 in the expenditure, and 22,032 20 in the net revenue.

Of the net revenue of the year, the board have declared a dividend, for the last six months, of three dollars upon each share of stock, payable on and after the 15th day of November next.

Grigg's Band and Pulley Brake.

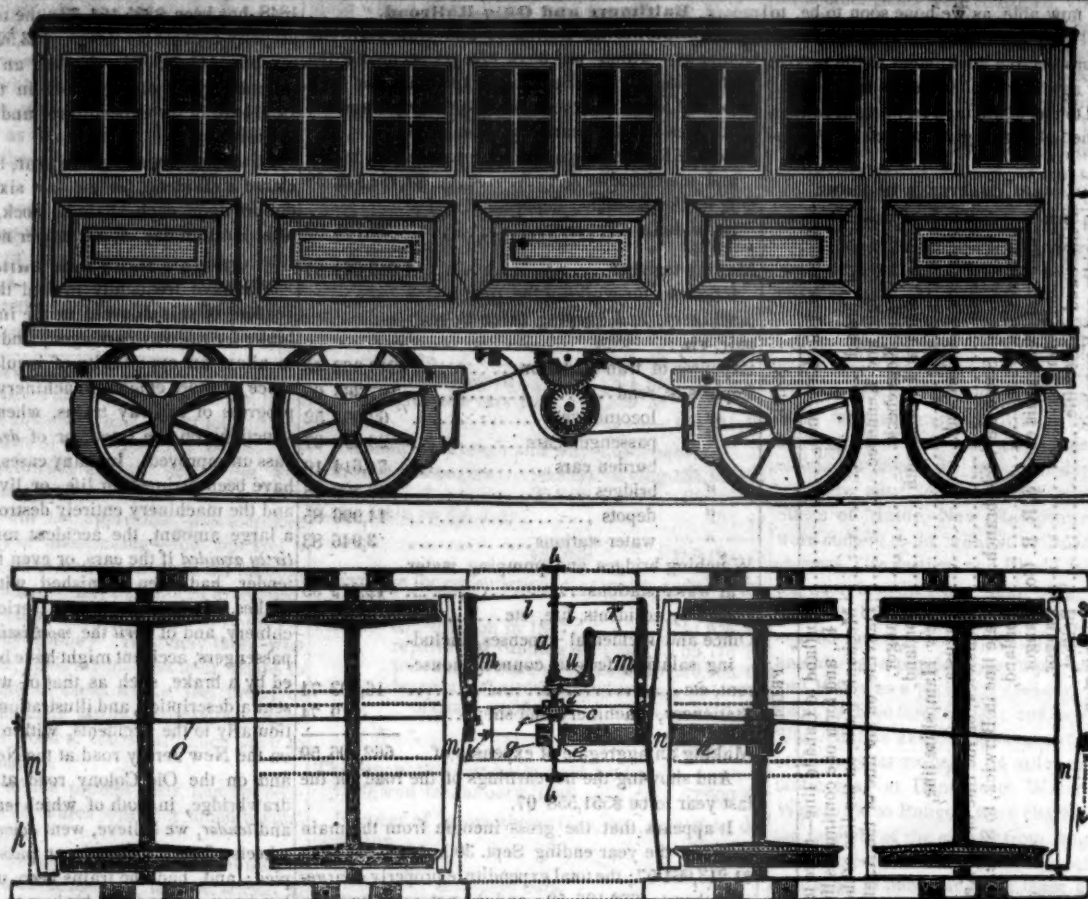
We have frequently invited the attention of the readers of this Journal to the improvement of the brake for railway carriages; and we do not intend to allow an opportunity of inculcating the importance of more efficient machinery for arresting the progress of railway trains, when approaching obstructions on the track, or of drawbridges open, to pass unimproved. In many cases, where passengers have been maimed for life, or lives have been lost, and the machinery entirely destroyed, or injured to a large amount, the accident might have been entirely avoided if the cars, or even the locomotive and tender, had been furnished with more powerful brakes. In two instances of serious damage to machinery, and of *peril* the most imminent to hundreds of passengers, accident might have been entirely avoided by a brake, such as that of which we here present a description, and illustration. We allude particularly to the accidents, within the current year, on the New Jersey road at the Newark drawbridge, and on the Old Colony road at the South Boston drawbridge, in both of which cases the locomotive and tender, we believe, went down, and the forward wheels of each forward car passed over the precipice; and, had the trains been under a little more headway, or had the brakemen, by any accident, been out of their place, every car, with its passengers, must have gone down into the water, and many lives have been lost.

It is our practice, when travelling on railroads, always to examine the engines and cars, to see what improvements we can discover, that we may speak of them for the benefit of others; and so also when we find a model of any improvement which promises utility to companies, and, especially safety to passengers, we endeavor to examine its application in practice, and obtain the opinion of practical and disinterested men who have used it, that we may be able speak of it as it deserves. And in this way have we endeavored to understand this apparatus.

Mr. Geo. S. Griggs, the inventor, is, and has been for years, the superintendent of machinery on the Boston and Providence railroad; and his brake has been in use on that road for several years, and is highly appreciated by those who have used it, as will be seen by the annexed statement, of Messrs. Turner and Heustis. We also conversed, in relation to it, with the able and gentlemanly superintendent of the road, *W. Raymond Lee, Esq.*, who spoke of it in high terms; and we therefore feel justified in calling the attention of railroad managers to it, as an important appendage to their trains—either upon the tender, or cars, or both.

One of its peculiar advantages consists in its being under the control of the *engineer*, as well as of the conductor, and may therefore be much sooner brought into use, when obstructions are discovered on the track, than by giving a signal to the brakemen. The simple pulling of a line will put it in, or out of gear, and it may be applied to one, or more cars, at the same time.

The following description of the illustrations will give an idea of its construction and operation.



The first of the above drawings is an elevation of an eight wheel passenger car, with Grigg's band and pulley brake attached.

The second drawing is a horizontal section, showing the band and pulley brake.

DESCRIPTION.

a, represents a shaft suspended to body of the car by boxes *b b*.

c c, a cog wheel, which revolves on shaft *a*, when not connected by clutch *d*.

e, a frame suspended on shaft *a*, supporting pinion *f*, pulley *g*.

h, a belt passing over pulley *g* and the axle of the car *i*.

k, tempering screw, connected with frame *e* and the body of the car, to keep the belt sufficiently tight to allow the car wheels to just turn, or to make them slide when the brakes are applied.

l l, chains attached to shaft *a*, and levers *m m*, which wind round the shaft *a* when wheel *e* is connected by clutch on shaft *a*—*m m*, levers connected to brakes *n n n n*, by rods *o o*, on one end of which are the tempering screws *p p*, to adjust the brakes to the wheels, so that they shall bring them all to slide at the same time, or so as just to revolve without sliding.

q, a forked lever, supported by the frame of the car to move the clutch *d*, by means of rod *r*, which is connected with the upright lever *s*, the top of which is in the form of a *T*, to which is affixed lines leading to the engine, by which the wheel *e* may be clutched to the shaft *a*, (the axle of the car acting on

the pulley *g* connected to pinion *f* by belt *h*), and cause the chains *l l* to wind on the shaft *a*, and thus draw on levers *m m*, connected with the brakes *n n n n*, and cause them to stop the revolution of all the wheels.

Two lines are attached to the *T*, that may be carried to any part of the train, so that the engineer, or any person on the train, may, by means of these lines, govern the brakes, and stop the train.

The advantages of this brake are described in the specification by the patentee to be, that expense is saved in the smaller number of brakemen required. The train may be checked as soon as the engineer, or any one forward, describes danger; and the apparatus is more effectual and more certain for this purpose than the common hand brake. The danger arising from the brakemen jumping off, as they sometimes do, is avoided. In case of some of the cars breaking loose, as they sometimes do, the lines are so adjusted that the brake is put in gear by the very circumstance of the cars thus breaking loose, and thus the cars detached from the train are stopped, instead of drifting on the road as they otherwise do, to the great danger of the cars thus detached, as well as of the other cars of the train; (an instance of the security from this brake in such an emergency has actually occurred on the Boston and Providence road.) If the object be merely to check the speed and not stop the train, this is done by merely loosening the pulley band by means of the tempering screw, by which its degree of tension is regulated. The

brake is of comparatively small expense.—The application of it does not prevent the managing the brake by hand or foot as heretofore, whenever this is preferred.

The principle and operation of this brake will be obvious to any person in the least acquainted with the subject, from the above drawings and description, and the patentee deems it to be quite unnecessary to enlarge upon its utility. The want of some ready and effectual means of controlling and stopping the train, in cases of emergency, has, as is well known, been the occasion of many disasters, and the great loss of lives and property.

The following letters, above referred to, give practical, and therefore useful, opinions: and we give them to sustain our own, formed from observation only.

"I have been employed for the last five years, by the Boston and Providence railroad company, in different capacities, i. e. conductor, engineman, way agent, and for the last year, I have had charge of the cars at Roxbury. During the above period, I have had occasion to use the many different kinds of brakes applied to the cars of this company, and I pronounce your patent to be the cheapest, safest and most durable brake that I have ever known applied to railroad cars. The advantages this brake has over the common or ordinary brakes, are perceivable by any practical man conversant with railroads.

Very respectfully, your obedient serv't,
S. HEUSTIE"

November 20th, 1840.

"During five years experience as an engineer, on the Boston and Worcester, and Worcester and Norwich railroads, I have had an opportunity to fully test your self acting brake. The advantages derived from this brake over all others, is perfectly perceptible from its manner of adjustment, and from the principle upon which it is mechanically constructed. In several cases of emergency, I have found it paramount in point of power, to that of six of the ordinary brakes which are in use on several northern roads—and I take great pleasure in recommending its general application to railroad cars, as being highly advantageous both to the proprietors and to the travelling public, as, in this, safety and economy are combined.

Yours respectfully,

GREENLEAF TURNER."

Boston, January 1st 1841.

We understand that the actual cost of constructing these brakes does not exceed twenty-five dollars.

—ED. R. R. J.

Comparative Receipts on the South Carolina Railroads for 1847 and 1848.

The question was asked us more than once during the month of June, "is there not a falling off in the travel and transportation on the railroads, this year as compared with last?" and we believe that there was such an opinion prevailing to a considerable extent among those interested. Possibly such might have been the case during a portion of the first half of the year, but not as a uniform thing; and if we could compare the business of the two years upon all the American roads up to this time, we should find a very considerable increase in the aggregate receipts—from 15 to 20 per cent. we feel assured—and we predict that for the whole year the increase will exceed 20 per cent.—even though many of the companies have materially reduced their rates, both of fare and freight.

We have been favored with the following comparative statement of the monthly receipts upon the South Carolina railroads for the first nine months of 1847 and 1848—by which it will be seen that the receipts for the first six months of 1847 exceeded those of 1848 by \$7,795 04—but at the end of nine months the balance was the other way by \$41,965 81, which will be largely increased by the close of the year.

Receipts on the South Carolina Railroads for the first nine months of 1847 and 1848.

	1847.	1848.
January.....	\$67,123 67	\$72,850 28
February.....	61,870 44	58,824 59
March.....	73,272 20	74,463 59
April.....	65,486 60	55,251 41
May.....	46,901 97	42,599 66
June.....	36,109 57	39,049 88
	350,834 45	343,039 41
July.....	30,930 26	43,964 59
August.....	35,502 67	48,498 77
September.....	57,248 85	80,979 27
	474,516 23	516,482 04

Excess over same period last year.....\$41,965 81

Baltimore and Susquehanna Railroad.

The president of this company has, we understand, remitted to the treasurer of the State of Maryland, \$3,000 on account of interest due to the State, making the sum of \$50,000 which he has re-

mitted to the treasurer during the company's fiscal year, ending the 30th September, 1848; exceeding the treasurer's estimate \$10,000. This sum has, we are pleased to learn, been paid from the earnings of the road, notwithstanding there was a falling off of 16,000 in the gross receipts, as compared with 1847. The falling off in the receipts was entirely in the transportation, which was caused by the interruptions on the main line of the Pennsylvania improvements, from the great freshet of last October, and the burning of the Freeport aqueduct in June.

The first annual report of the engineer of the Pennsylvania railroad company, gives the annexed estimate of the cost of a continuous road from Harrisburg to Pittsburg, in connection with the Allegheny Portage railroad graded by a double track throughout, except the branch to Hollidaysburg.

PENNSYLVANIA RAILROAD.

The following statement shows the estimate of the chief engineer for the opening and completion of this road to Pittsburg—excepting the section over the mountain, for which the Portage, or State road, of 36 miles, with ten inclined planes, is to be used, while the mountain section is being constructed. The inclined planes on the Portage road will doubtless be improved, and we may thus have better test of that mode of surmounting elevations, than has been heretofore had in this country.

The estimate is as follows, viz:

CONSTRUCTION.		
Graduation.		
	Miles.	
From Harrisburg to Robinson's.....	132-67	\$1,990,952
Robinson's to Hollidaysburg....	6-33	32,000
Hollidaysburg to Johnstown....	36-67	
Johnstown to Pittsburg.....	76-00	1,510,000
	251-67	3,537,952
Superintendence and contingencies....		419,754
Superstructure.		
Including turnouts, on 215 miles.....		2,408,000
Cost of road.....		6,365,706
Interest account.....		450,000
Land damages and fencing.....		154,294
Grand total.....		6,970,000

To the above amount should be added, for the purchase of depot grounds, erecting of warehouses, and shops, and the construction of cars and locomotives, as follows:

Warehouses, including grounds at depots.....	\$475,000
Shop and machinery.....	185,000
Locomotives.....	510,000
Passenger and burden cars.....	820,000
Total.....	1,990,000

Making the whole cost of the road, graded for a double and a single track laid, including outfit, \$8,960,000.

It will not be necessary to expend the whole of this amount until some time after the road is in use to Pittsburg.

The amount of funds required to open the highway is \$6,520,000, of which there is secured by public and private subscription, 5,250,000, leaving to be provided 1,270,000, which, with the amount necessary to stock the road with cars and locomotives, makes the aggregate 2,610,000.

This amount will be provided in good time, and the work put in successful operation at the earliest possible period. The work was too long delayed, of this the people of Philadelphia are now convinced, and it will not be allowed to lay by the way hereafter.

[From the Philadelphia "Commercial List."] Pennsylvania Coal Trade for 1848. From the Lehigh Mines.

The amount of coal shipped from the Lehigh mines during the week ending the 14th inst., and since the opening of the navigation, has been as follows:

	This week.	Total this year—tons.
By Lehigh company, Oct. 16.....	2,509 04	194,192 09
By Room Run.....	2,809 13	101,531 16
By Hazleton.....	2,319 00	74,896 00
By Beaver Meadow.....	2,915 02	70,293 00
By Buck Mountain.....	1,768 13	60,283 00
By Spring Mountain.....	1,038 09	53,446 02
By Cranberry Mines.....	421 00	11,962 00
White Haven.....	49 18	8,720 10
Diamond Co.....	598 13	3,799 17
Total.....	14,429 16	579,124 14

From the Schuylkill Mines.

The amount of coal forwarded by Reading railroad during the week ending the 19th inst., and since the 1st of January, has been as follows—

	Tons.
From Schuylkill Haven.....	10,877 11
" Pottsville.....	5,468 09
" Port Carbon.....	8,751 03
" Port Clinton.....	2,716 01

Total this week.....	27,813 04
Total this year.....	1,023,486 16

The amount of coal brought to market by the Schuylkill canal during the week ending the 19th inst., and since the opening of the canal, has been as follows:—

	Tons.
From Pottsville and Port Carbon.....	8,144 19
" Schuylkill Haven.....	5,128 17
" Port Clinton.....	687 16

Total this week.....	13,961 12
Total this year.....	362,314 00

Recapitulation.—Total Shipments this Season.

By Lehigh companies.....	579,124 14
By Reading railroad.....	1,023,486 16
By Schuylkill canal.....	362,314 00
Total.....	1,964,925 10

Atlantic and St Lawrence Railroad.

This company has pushed on its operations with great spirit, and has accomplished much within the two years since it broke ground.

The present indications are favorable for a connection with the Canadian portion of the line, and we hope for an early completion to Montreal. We give the report of the engineer, which shows the condition of the work, and that it is progressing in a very successful manner.

ENGINEER DEPARTMENT.

Portland, July 10, 1848.

HON. W. P. PREBLE,

President St. L. & A. R. R. Co.

Sir: The period has arrived when it becomes my duty to submit a report of the operations of this department, during the year ending the 1st of July.

1. *Grading and Bridging.*—At the date of my last annual report, there were 74½ miles of road located, 28½ miles under contract, and a considerable amount of work done. In the month of August last, the remaining portion of the line then located, was let to responsible contractors, and the work soon thereafter commenced.

The grading of the first 11½ miles, with the exception of some heavy wood, was finished last year, and the whole, together with

the large amount of bridging on this division of the road, was completed in March last.

The second division, 17½ miles in length, was put under contract in November, 1846, but owing to the unfavorable weather during the succeeding winter and spring, only a small amount of work was done. The whole of this work, except one section west of the junction of the Androscoggin and Kennebec road, may now be regarded as substantially finished, nothing of consequence remaining to be done, except the trimming of the slopes and roadbed, giving a total distance graded, for the reception of the track, of 27½ miles.

The grading on a portion of the third division, comprising an additional distance of 11 miles, is rapidly progressing, and more than half the work done. This carries the road to Mechanic Falls.

The excavation and embankment have been laid out for a single track, having a width in excavation of 22 feet and 15 feet on embankment. Where there was a surplus of earth excavation over embankment, it was deposited in the roadbed, thus forming a double track embankment; and in some cases where there was a deficiency of earth in the cuts for embankment, the deficiency was made up by enlarging the cuts for a double track. The aggregate length of double track road is six miles.

The soil of the portion of the road now graded, is much of it of an unfavorable description, it being mostly hard blue clay, which on exposure to frost and rains assume an unstable and treacherous character. The slopes are liable to slide, and therefore require close attention and some additional expenditure to preserve and render them permanent. This is particularly the case between Portland and North Yarmouth, and also on sections 14 and 15. In several of the cuts, quicksand of a troublesome character have been encountered requiring much precaution to give stability to the roadbed. In all the cuttings where the soil is of an unsuitable character for the roadbed, the earth has been removed from 1½ to 3 feet below grade, and the space filled in with good material. The embankments, also, when formed of clay are covered with gravel, which is indispensable to a permanent roadbed. As your road advances into the interior, the soil is of a more sandy and gravelly character, and a considerable portion will require no additional ballasting to sustain the track.

In the construction of the larger and more important mechanical structures, provision has been made for a double track. Protection walls are also placed in a proper position to sustain double track embankment. The masonry of Presumpscot bridge, and other structures which cannot be enlarged hereafter without great difficulty and excessive cost, have been designed for a double track. The masonry of the bridges is formed of the best granite, laid in courses with alternate headers and stretchers, and is of the most substantial character. Nothing has been expended for ornament, but the whole has been planned solely with reference to economy and permanency. In the execution of the work for the

Presumpscot bridge, difficulties of a formidable character were encountered. The site of the south abutment was at a point where the mud and water varied in depth from 3 to 12 feet below low water, and the average rise of tide was 10 feet. The surface of the rock was found to be extremely irregular, and covered with alternate layers of hard and soft earth, in which boulders and logs were embedded.

The irregularity of the rock and the unfavorable nature of the material covering it, rendered the use of piles for the foundation impracticable; and, for the same reasons, the adoption of a coffer dam, for the purpose of removing the earth and founding the masonry on the rock, would have been attended with delay and great expense.

The plan adopted was, first to remove the earth from the rock, which was done by an underwater excavator, after which to frame 12 inch hewn timber into squares of 3½ feet each from centre to centre, of sticks, by halving and spiking each at their intersection. The first course was framed so as to fit the lowest part of the rock, and as the successive courses were added, each was made to conform to the surface of rock, as the bearing was increased, till the woodwork covered the whole space for the foundation, after which it was carried up perpendicularly to a point 3 feet below low water, and upon this two courses of timber running in opposite directions, were spiked, upon which the masonry was commenced. Although a portion of the masonry rests directly on the rock, and another portion on a timber foundation of over 10 feet depth, no unequal settling took place during the progress of the work, nor has the least change since been observed in any part of the masonry.

A portion of the protection wall at this point was somewhat disturbed by the pressure of the embankment, which is over 40 feet high, on the soft material at the bottom, but proper measures were immediately taken which prevented any further movement. It has since been completed and incorporated with the wings of the abutment in a permanent manner, and appears of a substantial and durable character.

The masonry of most of the other bridges rests on pile foundation, and was laid below water line by the use of coffer dams.

The main walls of culverts are generally of substantial dry rubble masonry, the wings, parapets and coping being hammer dressed masonry.

The wood work of the truss bridges is constructed on the plan of "How's patent improved," having cast iron bearings. The plans of this work were prepared with much care, and with reference to the heavy engines and great traffic which will pass over the road. A much larger amount of material was required in the construction of the bridges than is usual on other roads, and it is so disposed as to give strength and stability to those parts which heretofore have first failed, and more durability to the whole structure. They are arranged for a single track, and such provision made as will permit the addition of a

second track hereafter, without any interruption of the traffic of the road, or difficulty in the execution of the work. These bridges should all be eased and protected from fire and exposure to the weather, by tin roofs.

The total length of truss bridging on the portion of the road now graded, is 870 feet, which has cost an average of \$17 12 per foot of bridge.

The total length of pile bridging is nearly three quarters of a mile, and the whole is constructed for a double track. The pile bents are placed at distances of from 10 to 15 feet apart, and the distance from the floor of the bridge to the surface of the ground or bottom of the water, varies from 15 to 20 feet.

A draw has been constructed in Back Cove bridge of 35 feet opening, and is designed to accommodate two tracks. It is formed of four light trusses, which are operated by the rack and pinion, the trusses swinging on hinges. The trusses for both tracks move at the same moment, and by the same power, but in opposite directions; and those of each track approach each other in a parallel position as they recede from their bearings in the bridges, till they reach the wings of the draw, where they are folded together in a recess by a movement similar to a parallel rule. The time required to open or shut the draw is less than two minutes, which is done by one man, making six revolutions with a lever of 11 feet length.

The grading of the first and second divisions of the road being nearly completed, I have prepared the following tabular statement, showing the principal items of work, the number of yards per mile, and the average cost per yard. By contrasting these prices with those for similar work on other roads, the stockholders will be enabled to judge of the economy with which their road has thus far been constructed. It must be remembered that the cuts on nearly the whole line are of hard blue clay or indurated earth of other descriptions. Common excavation, by our classification, includes ordinary loam, sand, gravel, or any kind of earth which is not indurated, and the average cost of removing this has been but 96 cents per cub. yard. The whole has been executed at much less per yard than any work of similar character within my knowledge.

On other roads, owing to the high prices of provisions and labor last year, a great number of contractors failed, their contracts were abandoned, and the work relet at an advance of from 10 to 15 per cent. on the original prices; while on your road, the whole of the work under contract, with the exception of a comparatively small amount on one section, has been executed at the original prices, and at a cost below the original estimate.

The bridges, with one exception, have been built by contract, the contractors furnishing all the materials and performing the work at a given rate per lineal foot of bridge, and these prices are considered low, if reference is had to the character of the work.

These results must be gratifying to the friends of the enterprise, and are evidences

of the ability and energy of the contractors. The total estimated cost of grading and bridging from section No. 1 to 17, inclusive, was \$368,298.

The total expenditure for the items on this part of the line, up to the 1st of July, is \$338,620.

Showing an excess in the original estimate over expenditures up to that date, of \$29,678.

The cost of the work remaining to be done will fall short of this excess.

Tabular Statement of Grading and Masonry from Section No. 1 to 17, inclusive.

Sec.	Grading.				Masonry.		
Length,	Earth excavation, cub. yards.	Loose rock, cubic yds.	Solid rock, cub. yards.	Embankment haul.	Protection wall, c. yds.	Masonry in culvert, c. y.	Do. in B. abutments.
12.12	54.341	1.200	10.241	65.782	13.999	185	1.420
20.96	17.140	4.430	454	17.951		436	
31.00	39.884		4.213	43.247		681	
40.95	96.202			96.202	4.803	472	2.742
51.00	28.446		885	28.050		400	
61.00	21.142			19.960		780	
70.93	16.235			13.842		461	
81.00	14.998		500	12.555		300	
91.25	21.145		1.190	16.812		354	
101.42	18.125	100	1.686	18.677		432	
112.50	32.500			10.000	100	257	1.000
122.35	62.000			55.000		458	2.000
132.40	86.600	100	230	80.000		976	
142.48	78.435	614	362	56.400		1.466	
151.93	53.000	180	800	53.000		506	
162.00	79.642	110	952	79.642	3.972	296	1.393
172.25	77.617	1.737	534	80.000	2.960	605	1.574
Total.	797.452	8.471	21.817	746.763	25.134	9.065	10.129
Av. No of yds. pr. m.	28.981	307.6	792	27.115	912.6	329.9	367.7
Average cost per cu. y.	\$0.145	\$0.240	\$0.754	\$0.033	\$1.116	\$2.51	\$4.295

Tabular Statement of Bridges from No. 1 to 17, inclusive.

Description and location of bridges.	Length in feet.	Average cost per ft. of bridge.	Total cost.
Pile bridge at terminus...	2233	\$6.80	\$15,184.40
" Back Cove...	1519	\$16.45	\$24,987.55
Truss " Presumpscot R. at	320	\$20.00	\$6,400.00
" " section 11 and 12	264	\$17.68	\$4,667.52
" " " 16 and 17	286	\$13.40	\$3,832.40

* Double track. † How's patent single track.

2. Track.—The track of the road from Portland to Royal's river, a distance of about 11 miles, was placed under contract in February last, and the work has so far advanced as to permit the cars to run to North Yarmouth. The iron and timber required for the balance of the road to Mechanic Falls, an additional distance of 21½ miles, are contracted for, excepting that portion of the timber required between Danville and the latter place. The road may be opened for business to the junction of the Androscoggin and Kennebec road in September next, and the remainder of the distance to Mechanic Falls, in November next.

The track of the road is formed of pine longitudinal sills, 7 by 11 inches square, em-

bedded in gravel, tied together transversely by oak ties 2½ inches thick, and 6 in. wide, fitted into, and even with the surface of the sill, by a dovetail joint, and secured with keys of the same description of timber.

The iron is of the bridge pattern, weighing 63 pounds per yard, and is laid with a continuous bearing on the sills, being secured in its position by claw headed spikes, chairs, and centre plates. The gauge of the road, or the space between the rails, is 5½ feet.

There is half a mile of double track laid at the terminus, also side tracks leading to the engine house and to the works of the Portland company.

3. Depot Grounds, Buildings, etc.—Contracts were entered into early last year, for the construction of crib work and the requisite earth filling, to provide a site for the buildings at the terminus, and other depot purposes. This work was mostly finished last year.

A portion of the crib work has somewhat changed its position, in consequence of the great depth of mud, but it is now rendered permanent and secure. The line of the dock is parallel with the road, the approach to it by vessels made more convenient, and the whole is much improved.

In the month of May last, a passenger building, and an engine house at the terminus, and a building for the North Yarmouth station, were placed under contract. The passenger building is 200 feet long and 75 ft. wide, and is designed to accommodate, for the present, both the freight and passenger business at the terminus. It is of sufficient width for three tracks, and two platforms of 20 feet width each. The portion now erected is intended, for the present, to accommodate the several trains arriving at and departing from this station; and it is designed, hereafter, to carry out the building with a suitable front, to the east line of India street, which will furnish the requisite rooms for passengers and offices of the company.

This addition will make the whole length of the building 250 feet, and allow 3 tracks in it of 320 feet length each. If greater strength than this is hereafter required, it may be conveniently obtained by adding to the eastern end of the building. This building stands parallel to the dock and to the line of the road, the track approaching it on a straight line for the distance of half a mile.

It is conveniently situated for the transfer of freight from the cars to vessels; and passengers going out or arriving in steamboats, have merely to cross a platform between the cars and the boat.

The location of your road is such at the terminus, that it is parallel with the harbor for the distance of half a mile, and for the whole of this distance, vessels have an uninterrupted approach to the road, where they may receive or discharge their cargoes directly from and to the cars. Such are the facilities, at the present time, that vessels now discharge their lading of iron, timber and other building materials, at any point within this distance, on the main tracks of the road.

The engine house is of brick, and it is

only intended to accommodate the requisite number of engines for the business of the first few years, after which it will be useful for the storage and repair of cars. It is of sufficient capacity to contain six engines, and a turning table of 45 feet diameter. A small addition made to the building, at such time as the business of the road requires it, will give ample room for nine engines, and it will still be of convenient shape and an economical building for other purposes, when superseded by an engine house of the requisite dimensions to accommodate the business of the whole road.

The passenger station at North Yarmouth will probably be finished the present month, and the freight business of that place may be accommodated, for the present, by the use of the building purchased with the lands of the company at that place, which it is proposed to move to the point required for that purpose.

The plans of buildings required for other stations are matured. The drawings and specifications are in progress, and will soon be submitted for the consideration of the board.

Two turning tables have been constructed which are respectively 25 and 45 feet in diameter. The large table is now in use and operates satisfactorily. The small one is designed for the station to which the cars may run during the coming winter.

4. Machinery for the Road.—Two locomotives have been purchased to provide for the immediate necessities of the road. One has been in use on the road a considerable length of time, hauling gravel, timber, iron, etc. The other will be used for the passenger business till other engines are completed and will also aid in the transportation of building materials.

There have been ordered from the works of the Portland company, three engines, six passenger cars, two baggage and mail cars, thirty enclosed freight, ten platform and twenty earth cars. There are now delivered and in use on the road, two passenger, four platform, and eight earth cars. The work on the engines is progressing, and the builders hope to deliver one by the first of September, one in October, and the third in season for the spring business. Two passenger and all the earth and platform cars are to be finished by the first of September, and the remaining passenger, and all the enclosed freight cars by the first of November.

5. Surveys.—A careful survey has been made during the last year, of the whole country between Paris, (the point to which the final location of the road is made), and the province line. The total length of line surveyed is over 150 miles, which includes the survey of several subordinate routes.

A line was traced, during the last autumn and winter, through the Little and Great Androscoggin valleys, the Ammonoosuc valley, and on both the New Hampshire and Vermont side of the Connecticut valley. Surveys were also made for a branch to Lancaster, and to test the practicability of carrying

the main line to that place, through the valleys of Moose and Israel's river. There are several routes by which the boundary line may be reached, all have been instrumentally examined, except that by the Nulhegan valley, the surveys of which are now progressing. These surveys will be completed the present summer, and the result of the whole will then be submitted for the consideration of the board.

These routes diverge in the Connecticut valley at a point about 22 miles south of the province line, and again unite near Lenoxville, in Canada, a distance of about 25 miles north of the boundary.

This required that the provincial corporation should cooperate with you in the survey of these routes, and I am happy to state, that thus far the surveys have advanced in concert, and will be completed on each side of the boundary at about the same time. When the question of junction shall have been definitely settled, the whole route of your road may be regarded as determined.

The disbursements through this department for surveys and construction up to the 1st of July, were \$454,844 90.

In conclusion, permit me to urge the importance of completing the road and of opening it for business to Mechanic Falls the coming autumn. The grading will be finished at an early date, and it only remains to obtain the timber and lay the track, to bring into use this additional piece of road. Mechanic Falls is an important point, from which roads diverge in every direction, and to which the trade and travel of the surrounding country will naturally concentrate. By extending it to this point, a large additional trade will be secured to the road, which otherwise will pass through other channels to market.

I have the honor to be, Sir,

Your obedient servant,

A. C. MORTON,
Chief Engineer.

To the Stockholders of the Atlantic and St. Lawrence Railroad Company:

GENTLEMEN: In compliance with your vote passed at the last annual meeting of the company, I have the honor to present the following brief statement of the receipts and disbursements of the treasury to the 1st of July last.

There has been receive to the above date, from assessments on shares in the capital stock,

Rents, interest, etc.,

Bills payable,

Total,

The amount paid and finally chargeable to cost of road and its equipments, is, for land damages,

For depot lands,

For fencing,

For interest and office expenses,

For sundry accounts, including

grading and masonry, bridging,

superstructure, engineering, etc.

For cars and engine,

Total expenditure,

Of the item bills payable, the sum of \$36,000 is for the purchase in part of the depot lands, for which the company's notes are outstanding, maturing at various times, from one to fourteen years hence, and secured by mortgages of the premises. The balance is for temporary loans, in anticipation of receipts from assessments.

The directors, in addition to the advance payment at the time of subscription, have made sixteen assessments, the last falling due the 1st of August next.

CHARLES E. BARRITT, Treasurer.
Office Atlantic & St. Lawrence R. R. Co.,
Portland, July 24, 1848.

Memorandum.—The above account of disbursements does not include work done, and purchases of iron, timber, etc., made, but not yet due and paid for. These latter items may be safely estimated at something over \$50,000.

WM. E. PREBLE, President.

Boston and Maine Railroad.

ANNUAL REPORT, SEPTEMBER, 1848.

Few roads in this country, commencing on so small a scale, have grown to such importance. It was at first, if we recollect, a mere branch from the Lowell road at Wilmington, 15 miles out of Boston, to Andover—and its capital about \$100,000! It is now one of the important lines out of Boston, showing an outlay of over three and a half millions, and paying good returns on that.

We consider this one of the best managed railroads in the country. It has been always gradually extending its operations—increasing its usefulness—of course increasing its outlay of capital—yet always foremost in reducing its charges; by which its business has steadily increased, the people have been accommodated, and the shareholders have received large returns, or from 6 to 10 per cent. per annum.

Such extensions could not have been accomplished, and such returns made to the shareholders—with a rival, or competing road, within fifteen miles, to divide the traffic, and an outside steamboat line, in addition to the railroad, to divide the through travel—except by the very best of management.

The report speaks for itself, and we give it entire—and ask those who pursue a different course of policy in their rates of charge, to investigate the causes of a success which has induced a further reduction of passenger fare to \$2 through, 110 miles, and to two cents a mile for way fares. If this can be done on this line, with their double competition, how much more successfully it might be done on the great thoroughfare between New York and Philadelphia, if monopoly was abolished, and fair competition introduced through New Jersey.

REPORT.

Soon after the annual meeting last year, it was determined by the directors, that preparation should be immediately made for the purpose of extending the double track of the road the whole distance from Boston to Lawrence. Contracts were accordingly made for the rails to be imported from England, and in the mean time, the roadbed and materials were to be prepared to receive them; and are now in great forwardness. The culverts and bridges had been originally constructed for the reception of a double track.

On the 1st of July last our passenger trains were withdrawn from the old track of the

road through Andover, and run over the new track through that town to Lawrence; thence along the south bank of the Merrimack river to the old line of road at North Andover.—Thus the whole distance of 32 miles from Boston to the Merrimack river at Bradford, over which we ran our trains in 1845—25 miles, including 15 miles of the Boston and Lowell railroad, have been superseded by the construction of 26 miles of road. These changes have occasioned a large expenditure of capital, as our repair shops and buildings for all kinds of work, which were on the line of the old road at Andover, must necessarily be abandoned, and others built to replace them, together with passenger and merchandise houses. It is believed, however, that the premises at Andover are so favorably located, that they may be readily sold.

The railroad bridge at Lawrence is completed; and we now deliver our passengers into Lawrence, upon the north bank of the Merrimack river. Tracks for merchandise extend along the canal, affording the most perfect railroad accommodations to all the present or future manufacturing establishments at that place. We are constructing about four miles of railroad through Lawrence and Methuen, to meet the Manchester and Lawrence railroad now building, at the line of the State of New Hampshire; and the whole of that road is expected to be in operation by the 1st of July next, thus opening a most important line of communication between the county of Essex, in Massachusetts, and the interior of New Hampshire, and lessening the distance between Manchester and Boston five miles. Lawrence is favorably situated for a great thoroughfare by railroad, when all the proposed roads entering there shall be completed. The Lowell and Lawrence railroad, and the Essex road, from Salem to Lawrence, now use our track, bridge and depot at Lawrence, and propose to make permanent arrangements with this corporation for their continued use; and our buildings at that place, are projected with reference thereto.

The Cocheco railroad, intersecting this road at Dover, is now under construction at Rochester, and will ultimately be continued to intersect the Boston, Concord and Montreal railroad at Meredith. The distance from that intersection to Boston, is represented to be the same by way of Dover as of Concord. The Great Falls and Conway railroad have about six miles of their road from Gt. Falls to Rochester, under construction, and propose to extend it without delay to the Three Ponds at Milton: these roads are mainly designed to open a railroad communication between the interior of N. Hampshire and Vermont, and the tide waters at Dover and Portsmouth. Yet this road must derive a benefit from their construction, as also from the construction of the Atlantic and St. Lawrence railroad at Portland, and of the Portland and Kennebeck and Waterville and Lewiston roads; all of which are about to be opened to some extent.

An act was passed by the legislature of Massachusetts, in May last, authorising the Eastern railroad company to extend their road

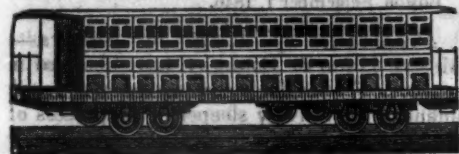
tution of a single small steel lozenge, three quarters of an inch long, for the two 5 inch astatic magnetic needles, and placed between two small coils, of peculiar shape. This form has the advantage, besides those already mentioned, of giving a signal free from that constant vibration of the needle, against which so much has been said—the penulous action of gravity being very limited, from its better adapted form.”—*Ibid.*

JAMES LAURIE, Civil Engineer.

No. 23 RAILROAD EXCHANGE, BOSTON, MASS.

Railroad Routes Explored and Surveyed. Estimates, Plans and Specifications furnished for Dams, Bridges, Wharves, and all Engineering Structures. October 14, 1848. 6m*

CAR MANUFACTORY, CINCINNATI, OHIO.



KECK & DAVENPORT WOULD RESPECTFULLY call the attention of Railroad Companies in the West and South to their establishment at Cincinnati. Their facilities for manufacturing are extensive, and the means of transportation to different points speedy and economical. They are prepared to execute to order, on short notice, Eight-Wheeled Passenger Cars of the most superior description, Open and Covered Freight Cars, Four or Eight-Wheel Crank and Lever Hand Cars, Trucks, Wheels and Axles, and Railroad Work generally. Cincinnati, Ohio, October 2, 1848. 411f

TO CONTRACTORS.

GREAT LETTING OF WORK ON THE CLEVELAND, COLUMBUS & CINCINNATI RAILROAD.

Proposals will be received at the office of the engineer, in the city of Cleveland, until the 1st day of November next, at noon, for the grading, bridging, and masonry, also timber for the superstructure of one hundred and thirty miles of the Cleveland, Columbus and Cincinnati Railroad, lying between the cities of Cleveland and Columbus. Said work comprises some of the finest ever offered to contractors, and will be let in long or short sections, as may be desired. The approximate quantities are 3,500,000 yards earth excavation, 30,000 perches masonry, 300,000 cross ties, or sleepers, etc.

Plans, profiles and specifications of the work will be ready for inspection at the offices in Cleveland and Columbus on and after the 15th of October next. Payments will be made monthly, on a fair average value of work done; twenty per cent. of which will be retained to ensure fulfillment of contract.

FREDERICK HARBACH, Eng.

September 21, 1848. 341f

DEAN, PACKARD & MILLS,

MANUFACTURERS OF ALL KINDS OF

RAILROAD CARS,

SUCH AS

PASSENGER, FREIGHT AND CRANK CARS,

— ALSO —

SNOW PLOUGHS AND ENGINE TENDERS OF VARIOUS KINDS.

CAR WHEELS and AXLES fitted and furnished at short notice; also, STEEL SPRINGS of various kinds; and

SHAFTING FOR FACTORIES.

The above may be had at order at our Car Factory, REUEL DEAN, ELIJAH PACKARD, ISAAC MILLS, SPRINGFIELD, MASS. 1748

RAILROAD IRON.

3000 TONS, ABOUT 60 LBS. PR lineal yard—deliverable early in the Spring; and of undoubted quality, can be contracted for at a low rate. For sale by

DAVIS, BROOKS & CO.,

68 Broad street.

New York, Sept. 16, 1848, 391f

Also on hand—1000 Tons best quality Rails.

FULLER'S PATENT INDIA RUBBER CAR SPRINGS.

—These Springs have been in use for nearly four years, with most complete success, and they are now in use upon most of the principal roads in this country. They are made of the best material, are economical, light, and very easy in their motion—all persons using them are guaranteed against adverse claims.

Offices 78 Broad street New York, and Jas. Lee & Co., 18 India wharf, Boston.

Railroad companies are cautioned against the statements made by the New England car company. The India rubber used by the patentee is the best that can be made, and does not conflict with any existing patent. The ridiculous statement that a patentee may not vend his own invention needs no remark.

The patent for these springs was granted to W. C. Fuller, in Oct. 1845, in the United States and in England; A Mr. Ray claims to have invented another spring, which counsel advise, is a mere evasion of Mr. Fuller's patent, and proceedings are being taken to stop that infringement.

"The New England Car Company" have published an article from the pen of Mr. Hale, president of the Boston and Worcester railroad, expressing his opinion concerning these springs—but they have forgotten to publish the whole of that article; it is therefore given in full now, and the portion omitted by the New England car company is printed in italics, that the public may judge of the manner in which this "company" pervert Mr. Hale's meaning.

G. M. KNEVITT, Agent,
78 Broad St., New York.

September 30, 1848.

[From the Boston Advertiser of the 7th June.]

INDIA RUBBER SPRINGS FOR RAILROAD CARS.

"Of the numerous uses to which the wonderful elasticity and durability of India rubber, renders this material applicable, we are hardly aware of one, in which it has been more successful than in forming springs for railroad cars. We have had occasion to observe, for some months past, its application to this use, on one of the passenger cars on the Newton special train of the Boston and Worcester railroad. It is there used not only for the springs on which the car rests, but for the springs attached to the draw bar, at each end of the car, to prevent any jar on the sudden commencement, or interruption of the motion of the car. For both these purposes it appears to be admirably adapted, and we do not learn that during the period in which it has been used, any defect in it has been discovered. It renders the movements of the car extremely easy, and protects it more effectually, we think, than any other spring which we have seen in use, from every harsh or unpleasant motion, either vertical or horizontal. It is also simple in its form and application, extremely light, and little liable to get out of repair. During the period of some months in which we have seen the springs in operation, there is no apparent wear or diminution of its efficiency. Each spring is composed of several circular layers or rings of India rubber, a thin metallic plate of the same size being interposed between each of the layers. From the simplicity of its form, it cannot be expensive, and it admits of being made more or less elastic almost at pleasure. The invention, we understand, was first patented in England, where it has been introduced into general use on several of the principal railroads, and we have no doubt it will come into very extensive use in this country. The patent for this invention, we understand, has been granted to Mr. W. C. Fuller in England and France, and also in this country. Mr. Kneville, of New York, is the agent for the patentee in the United States, and he has established a branch office for the supply of the article in this city, as may be learned from an advertisement in another column of this paper."

RAILROAD SCALES.—THE attention of Railroad Companies is particularly requested to Ellicott's Scales, made for weighing loaded cars in trains, or singly, they have been the inventors, and the first to make platform scales in the United States; supposing that an experience of 20 years has given a knowledge and superior advantage in the business.

The levers of our scales are made of wrought iron, all the bearers and fulcrums are made of the best cast steel, laid on blocks of granite, extending across the pit, the upper part of the scale only being made of wood. E. Ellicott has made the largest Railroad Scale in the world, its extreme length was one hundred and twenty feet, capable of weighing ten loaded cars at a single draft. It was put on the Mine Hill and Schuylkill Haven Railroad.

We are prepared to make scales of any size to weigh from five pounds to two hundred tons.

ELLICOTT & ABBOTT.

Factory, 9th street, near Coates, cor. Melon st.

Office, No. 3 North 5th street, Philadelphia, Pa.

TO RAILROAD COMPANIES AND MANUFACTURERS of railroad Machinery. The subscribers have for sale Am. and English bar iron, of all sizes; English blister, cast, shear and spring steel; Juniata rods; car axles, made of double refined iron; sheet and boiler iron, cut to pattern; tiers for locomotive engines, and other railroad carriage wheels, made from common and double refined B. O. iron; the latter a very superior article. The tires are made by Messrs. Baldwin & Whitney, locomotive engine manufacturers of this city. Orders addressed to them, or to us, will be promptly executed.

When the exact diameter of the wheel is stated in the order, a fit to those wheels is guaranteed, saving to the purchaser the expense of turning them out inside.

THOMAS & EDMUND GEORGE,

N. E. cor. 12th and Market sts., Philad., Pa.

THE NEWCASTLE MANUFACTURING Company continue to furnish at the Works, situated in the town of Newcastle, Del., Locomotive and other steam engines, Jack screws, Wrought iron work and Brass and Iron castings, of all kinds connected with Steamboats, Railroads, etc.; Mill Gear, of every description; Cast wheels (chilled) of any pattern and size, with Axles fitted, also with wrought tires, Springs, Boxes and bolts for Cars; Driving and other wheels for Locomotives.

The works being on an extensive scale, all orders will be executed with promptness and despatch. Communications addressed to Mr. William H. Dobbs, Superintendent, will meet with immediate attention.

ANDREW C. GRAY,

President of the Newcastle Manuf. Co.

LAP-WELDED

WROUGHT IRON TUBES

FOR

TUBULAR BOILERS,

FROM 1 1-2 TO 8 INCHES DIAMETER.

These Tubes are of the same quality and manufacture as those so extensively used in England, Scotland, France and Germany, for Locomotive, Marine and other Steam Engine Boilers.

THOMAS PROSSER,

Patentee.

28 Platt street, New York

ENGINEERS' AND SURVEYERS'

INSTRUMENTS MADE BY

EDMUND DRAPER

Surviving partner of

STANCLIFFE & DRAPER.



No 23 Pear street, below Walnut, 1710 near Third, Philadelphia.

**DIRECT ACTION ENGINES
FOR STEAMBOATS.****THE PATENT DOUBLE CYLINDERS,**

AND ALSO

THE ANNULAR RING PISTON ENGINES,
of Messrs. Maudslay, Sons & Field, of London,
may be built in the United States, under license,
which can be obtained of their agent,

THOMAS PROSSER, C. E.,
28 Platt street, New York.

May 6, 1848.

**WILLIAM JESSOP & SONS,
CELEBRATED CAST-STEEL.**

The subscribers have on hand, and are constantly
receiving, from their manufactory,

PARK WORKS, SHEFFIELD,

Double Refined Cast Steel—Square, flat & octagon.
Best warranted Cast Steel—Square, flat & octagon.
Best Double and Single Shear Steel—Warranted.
Machinery Steel—Round.

Best and 2d gy. Sheet Steel—for Saws and other
purposes.

German Steel—flat and sq., "W. I. & S." "Eagle"
and "Goat" Stamps.

Genuine "Sykes," L Blister Steel.

Best English Blister Steel, etc., etc.

All of which are offered for sale on the most fa-
vorable terms, by **WM. JESSOP & SONS,**

91 John Street, New York.

Also by their Agents—

Curtis & Hand, 47 Commerce St., Philadelphia.

Alex'r Fullerton, & Co., 119 Milk St., Boston.

Stickney & Beatty, South Charles St., Baltimore.

May 6, 1848.

NEW PATENT CAR WHEELS.

**THE SUBSCRIBERS ARE NOW MANU-
facturing Metallic Plate Wheels** of their in-
vention, which are pronounced by those that have
used them, a superior article, and the demand for
them has met the most sanguine expectations of the
inventors. Being made of a superior quality of
Charcoal Iron, they are warranted equal to any
manufacture.

We would refer Railroad Companies and others
to the following roads that have them in use. Hart-
ford and New Haven, Connecticut River Railroad,
Housatonic, Harlem, Farmington, and Stonington.

SIZER & CO.

January 29, 1848, if

Springfield, Mass.

RAILROAD IRON AND LOCOMOTIVE

Tyres imported to order and constantly on hand

by **A. & G. RALSTON,**

Mar. 20th

4 South Front St., Philadelphia.

TO MACHINISTS & MANUFACTURERS.

The Subscribers have taken the **READING
CAR AXLE MANUFACTORY**—and are prepar-
ed to execute orders for *Axles of every description*, and
Wrought Iron Shafts for Steamboats, Mills, etc.,
made from superior material, at short notice. Ad-
dress *Reading, Pa.*

ANDREW TAYLOR & CO.

August 5, 1848—3m

**RAILROAD IRON—SHEET IRON—
BRASIER'S RODS—HOOPS—SCROLL
—BANK'S BEST—& OTHER GOOD MAKES
OF ENGLISH IRON.**

100 Tons Railroad Iron—Staffordshire make—
56 pounds per yard—shipped from Liverpool 20th
July, expected to land on wharf from 10th to 20th
September.

Also have Invoices of Sheet Iron, Brasier's Rods,
Hoops, Scroll, and Band Iron, Banks best, and oth-
er good makes of English Rolled Iron, to arrive,
suitable for Railroad Axles, etc., etc., equal in qua-
lity to American Rolled Iron. I have agency of sev-
eral best makers in England and Wales, and can
import for Railroad Companies, and others, on best
terms, and at much less prices than they can be sup-
plied from American Mills.

DAVID W. WETMORE,

218 Water street.

New York, Sept. 9, 1848, 6w

MATTEWAN MACHINE WORKS.

THE MATTEWAN COMPANY HAVE
added to their Machine Works, an extensive
Locomotive Engine department, and are prepared
to execute orders for *Locomotive Engines* of every
size and pattern—also, *Trunkers, Wheels, Axles*, and
other Railroad Machinery, to which they ask the at-
tention of those who wish such articles, before they
purchase elsewhere.

STATIONARY ENGINES, BOILERS, ETC.

Of any required size or pattern, arranged for driv-
ing *Cotton, Woollen, or other Mills*, can be had on
favorable terms, and at short notice.

COTTON AND WOOLLEN MACHINERY.

Of every description, embodying all the modern im-
provements, second in quality to none in this or any
other country, made to order.

MILL GEARING.

Of every description, may be had at short notice, as
this company has probably the most extensive as-
sortment of patterns in this line, in any section of
the country, and are constantly adding to them.

TOOLS.

*Turning Lathes, Slabbing, Planing, Cutting, and
Drilling Machines*, of the most approved patterns,
together with all other tools required in machine
shops, may be had at the Mattewan Company's
Shops, Fishkill Landing, or at

39 Pine Street, New York.

WM. B. LEONARD, Agent.**FAIRBANKS' RAILROAD SCALES.**

THE SUBSCRIBERS ARE PREPARED TO CONSTRUCT at short
notice, *Railroad and Depot Scales*, of any desired
length and capacity. Their long experience as ma-
nufacturers—their improvements in the construction
of the various modifications, having reference to
strength, durability, retention of adjustment, accu-
racy of weight and despatch in weighing—and the
long and severe tests to which their scales have been
subjected—combine to ensure for these scales the uni-
versal confidence of the public.

No other scales are so extensively used upon Rail-
roads, either in the United States or Great Britain;
and the manufacturers refer with confidence to the
following in the United States.

Eastern Railroad,	Boston and Maine R. R.,
Providence Railroad,	Providence & Wor. R.R.,
Western Railroad,	Concord R. R.,
Old Colony Railroad,	Fitchburg R. R.,
Schenectady Railroad,	Syracuse and Utica R. R.,
Baltimore & Ohio Road,	Baltimore & Susq. R. R.,
Phila. & Reading Road,	Schuylkill Valley R. R.,
Central (Ga.) Railroad,	Macon and Western R.R.,
New York and Erie Railroad;	

and other principal Railroads in the Western, Mid-
dle and Southern States.

E. & F. FAIRBANKS & CO.

St. Johnsbury, Vt.

Agents { **FAIRBANKS & Co.**, 81 Water st. N. York.{ **A. B. NORRIS**, 196 Market st., Philad.

April 23, 1848.

1y+17

PATENT HAMMERED RAILROAD, SHIP

and Boat Spikes. The Albany Iron and Nail
Works have always on hand, of their own manufac-
ture, a large assortment of Railroad, Ship and Boat
Spikes, from 2 to 12 inches in length, and of any form
of head. From the excellence of the material al-
ways used in their manufacture, and their very gen-
eral use for railroads and other purposes in this coun-
try, the manufacturers have no hesitation in warrant-
ing them fully equal to the best spikes in market,
both as to quality and appearance. All orders ad-
dressed to the subscriber at the works, will be prompt-
ly executed. **JOHN F. WINSLOW, Agent.**

Albany Iron and Nail Works, Troy, N. Y.

The above spikes may be had at factory prices, of
Erastus Corning & Co., Albany; Hart & Merritt,
New York; J. H. Whitney, do.; E. J. Etting, Phil-
adelphia; Wm. E. Coffin & Co., Boston. ja45

THE SUBSCRIBERS ARE PREPARED TO

execute orders at their Phoenix Works for Rail-
road Iron of any required pattern, equal in quality
and finish to the best imported.

REEVES, BUCK & CO.,

Philadelphia.

ROBERT NICHOLS, Agent,

No. 79 Water St., New York.

CHILLED RAILROAD WHEELS.—THE

undersigned are now prepared to manufacture
their Improved Corrugated Car Wheels, or Wheels
with any form of Spokes or Disks, by a new process
which prevents all strain on the metal, such as is
produced in all other chilled wheels, by the man-
ner of casting and cooling. By this new method of
manufacture, the hubs of all kinds of wheels may
be made whole—that is, without dividing them into
sections—thus rendering the expense of banding un-
necessary; and the wheels subjected to this process
will be much stronger than those of the same size
and weight, when made in the ordinary way.

A. WHITNEY & SON,

Willow St. below 13th,

Nov. 10, 1847. [if.] Philadelphia, Penna.



**THE SUBSCRI-
ber has on hand
a good assortment of
his best Leveling and
Surveying Instru-
ments, among them
his improved Com-
pass for taking angles
without the needle—
also Bells, suitable
for Churches, Rail-
road Depots, etc.**

ANDREW MENEELY.

West Troy, May 12, 1847.

PATENT RAILROAD, SHIP AND BOAT

Spikes. The Troy Iron and Nail Factory keeps
constantly for sale a very extensive assortment of
Wrought Spikes and Nails, from 3 to 10 inches,
manufactured by the subscriber's Patent Machinery,
which after five years' successful operation, and now
almost universal use in the United States (as well
as England, where the subscriber obtained a patent)
are found superior to any ever offered in market.

Railroad companies may be supplied with Spikes
having countersink heads suitable to holes in iron
rails, to any amount and on short notice. Almost
all the railroads now in progress in the United States
are fastened with Spikes made at the above named
factory—for which purpose they are found invalua-
ble, as their adhesion is more than double any com-
mon spikes made by the hammer.

All orders directed to the Agent, Troy, N. York
will be punctually attended to.

HENRY BURDEN, Agent.

Spikes are kept for sale, at Factory Prices, by
& J. Townsend, Albany, and the principal Iron mer-
chants in Albany and Troy; J. I. Brower, 222 Water
St., New York; A. M. Jones, Philadelphia; T. Jar-
viers, Baltimore; Degrand & Smith, Boston.

Railroad Companies would do well to forward
their orders as early as practicable, as the subscriber
is desirous of extending the manufacturing so as to
keep pace with the daily increasing demand.

ja45

TO LOCOMOTIVE AND MARINE EN-

gine Boiler Builders. Pascal Iron Works,
Philadelphia. Welded Wrought Iron Flues, suit-
able for Locomotives, Marine and other Steam En-
gine Boilers, from 2 to 5 inches in diameter. Also,
Pipes for Gas, Steam and other purposes; extra
strong Tube for Hydraulic Presses; Hollow Pis-
tons for Pumps of Steam Engines, etc. Manufac-
tured and for sale by

MORRIS TASKER & MORRIS,Warehouse S. E. corner 3d and Walnut Sts., Phila-
delphia. 11f**CHILLED RAILROAD WHEELS.—THE**

undersigned, the *Original Inventor of the Plate
Wheel* with solid hub, is prepared to execute all or-
ders for the same, promptly and faithfully, and sol-
icits a share of the patronage for those kind of wheels
which are now so much preferred, and which he ori-
ginally produced after a large expenditure of time
and money.

A. TIERS,

Point Pleasant Foundry,

He also offers to furnish Rolling Mill Castings,
and other Mill Gearing, with promptness, having,
he believes, the largest stock of such patterns to be
found in the country.

A. T.

Kensington, Philadelphia Co., }

March 12, 1848. 11f

NORWICH CAR FACTORY, NORWICH, CONNECTICUT.

At the head of navigation on the River Thames, and on the line of the *Norwich and Worcester Railroad*, established for the manufactory of

RAILROAD CARS,
OF EVERY DESCRIPTION, VIZ:
PASSENGER, FREIGHT AND HAND CARS.

ALSO, VARIOUS KINDS OF
ENGINE TENDERS AND SNOW PLOUGHS.
TRUCKS, WHEELS & AXLES

Furnished and fitted at short notice.

Orders executed with promptness and despatch.

Any communication addressed to

JAMES D. MOWRY,

General Agent,

Norwich, Conn.,

Will meet with immediate attention.

175

MANUFACTURE OF PATENT WIRE

Rope and Cables for Inclined Planes, Standing Ship Rigging, Mines, Cranes, Tillers etc., by
JOHN A. ROEBLING, Civil Engineer,
Pittsburgh, Pa.

These Ropes are in successful operation on the planes of the Portage Railroad in Pennsylvania, on the Public Slips, on Ferries and in Mines. The first rope put upon Plane No. 3, Portage Railroad, has now run 4 seasons, and is still in good condition.

92v11y

NICOLL'S PATENT SAFETY SWITCH

for Railroad Turnouts. This invention, for some time in successful operation on one of the principal railroads in the country, effectually prevents engines and their trains from running off the track at a switch, left wrong by accident or design.

It acts independently of the main track rails, being laid down, or removed, without cutting or displacing them.

It is never touched by passing trains, except when in use, preventing their running off the track. It is simple in its construction and operation, requiring only two Castings and two Rails; the latter, even if much worn or used, not objectionable.

Working Models of the Safety Switch may be seen at Messrs. Davenport and Bridges, Cambridgeport, Mass., and at the office of the Railroad Journal, New York.

Plans, Specifications, and all information obtained on application to the Subscriber, Inventor, and Patentee
G. A. NICOLLS,
Reading, Pa.

TO RAILROAD COMPANIES AND BUILDERS OF MARINE AND LOCOMOTIVE ENGINES AND BOILERS.

PASCAL IRON WORKS.

WELDED WROUGHT IRON TUBES

From 4 inches to 1 in calibre and 2 to 12 feet long, capable of sustaining pressure from 400 to 2500 lbs. per square inch, with Stop Cocks, T's, L's, and other fixtures to suit, fitting together with screw joints, suitable for STEAM, WATER, GAS, and for LOCOMOTIVE and other STEAM BOILER FLUES.



Manufactured and for sale by

MORRIS, TARKER & MORRIS.

Warehouse S. E. Corner of Third & Walnut Streets,
PHILADELPHIA.

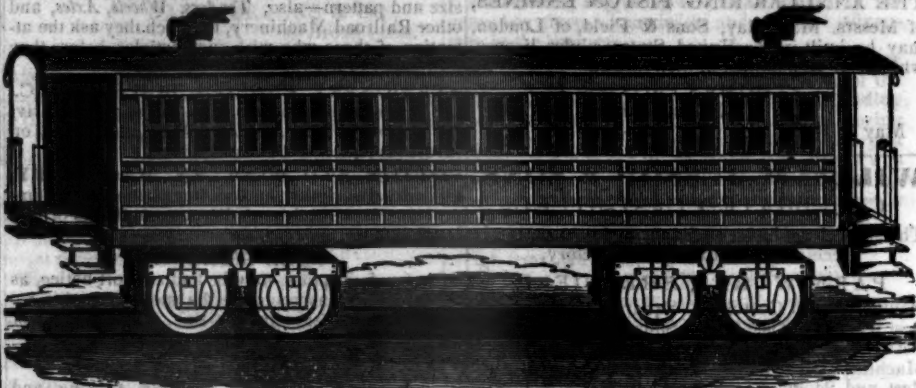
LAWRENCE'S ROSENDALE HYDRAULIC CEMENT. This cement is warranted equal to any manufactured in this country, and has been pronounced superior to Francis' "Roman." Its value for Aqueducts, Locks, Bridges, Flooms and all Masonry exposed to dampness, is well known, as it sets immediately under water, and increases in solidity for years.

For sale in lots to suit purchasers, in tight papered barrels, by
JOHN W. LAWRENCE,
143 Front street, New York.

Orders for the above will be received and promptly attended to at this office.

321y

DAVENPORT & BRIDGES' CAR WORKS, CAMBRIDGEPORT, MASS.



Manufacture to Order, Passenger and Freight Cars of every description, and of the most improved pattern; also furnish Snow Ploughs and Chilled Wheels of any pattern and size. Forged Axles, Springs, Boxes and Bolts for Cars at the lowest prices.

All orders punctually executed and forwarded to any part of the country.

Our Works are within fifteen minutes ride from State street, Boston—Omnibuses pass every fifteen minutes.

THE SUBSCRIBER IS PREPARED TO

execute at the Trenton Iron Works, orders for Railroad Iron of any required pattern, and warranted equal in every respect in point of quality to the best American or imported Rails. Also on hand and made to order, Bar Iron, Braziers' and Wire Rods, etc., etc.

PETER COOPER,

17 Burling Slip, New York

RAILROAD IRON, PIG IRON, ETC.

600 Tons of T Rail 60 lbs. per yard.

25 Tons of 2 1/2 by 1 Flat Bars.

25 Tons of 2 1/2 by 9-16 Flat Bars.

100 Tons No. 1 Gartsbrorie.

100 Tons Welsh Forge Pigs.

For Sale by **A. & G. RALSTON & CO.**

No. 4 So. Front St., Philadelphia

FRENCH AND BAIRD'S PATENT SPARK ARRESTER.

TO THOSE INTERESTED IN Railroads, Railroad Directors and Managers are respectfully invited to examine an improved Spark-Arrester recently patented by the undersigned.

Our improved Spark Arresters have been extensively used during the last year, on both passenger & freight engines, and have been brought to such a state of perfection that no annoyance from sparks or dust from the chimney of engines on which they are used is experienced.

These Arresters are constructed on an entirely different principle from any heretofore offered to the public. The form is such that a rotary motion is imparted to the heated air smoke and sparks passing through the chimney, and by the centrifugal force thus acquired by the sparks and dust they are separated from the smoke and steam, and thrown into an outer chamber of the chimney through openings near its top, from whence they fall by their own gravity to the bottom of this chamber; the smoke and steam passing off at the top of the chimney, through a capacious and unobstructed passage, thus arresting the sparks without impairing the power of the engine by diminishing the draught or activity of the fire in the furnace.

These chimneys and arresters are simple, durable and neat in appearance. They are now in use on the following roads, to the managers and other officers of which we are at liberty to refer those who may desire to purchase or obtain further information in regard to their merits.

R. L. Stevens, President Camden and Amboy Railroad Company; Richard Peters, Superintendent Georgia Railroad, Augusta, Ga.; G. A. Nicolls, Superintendent Philadelphia, Reading and Pottsville Railroad, Reading, Pa.; W. E. Morris, President Philadelphia, Germantown and Norristown Railroad Company, Philadelphia; E. B. Dudley, President W. and R. Railroad Company, Wilmington, N. C.; Col. James Gadsden, President S. C. and C. Railroad Company, Charleston, S. C.; W. C. Walker, Agent Vicksburg and Jackson Railroad, Vicksburg, Miss.; R. S. Van Rensselaer, Engineer and Sup't Hartford and New Haven Railroad; W. R. M'Kee, Sup't Lexington and Ohio Railroad, Lexington, Ky.; T. L. Smith, Sup't New Jersey Railroad Trans. Co.; J. Elliott, Sup't Motive Power Philadelphia and Wilmington Railroad, Wilmington, Del.; J. O. Sterns, Sup't Elizabethtown and Somerville Railroad; R. R. Cuyler, President Central Railroad Company, Savannah, Ga.; J. D. Gray, Sup't Macon Railroad, Macon, Ga.; J. H. Cleveland, Sup't Southern Railroad, Monroe, Mich.; M. F. Chittenden, Sup't M. P. Central Railroad, Detroit, Mich.; G. B. Fisk, President Long Island Railroad, Brooklyn.

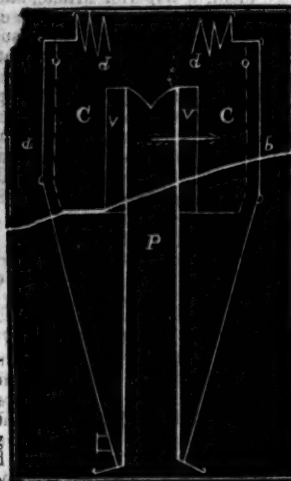
Orders for these Chimneys and Arresters, addressed to the subscribers, care Messrs. Baldwin & Whitney, of this city, will be promptly executed.

FRENCH & BAIRD.

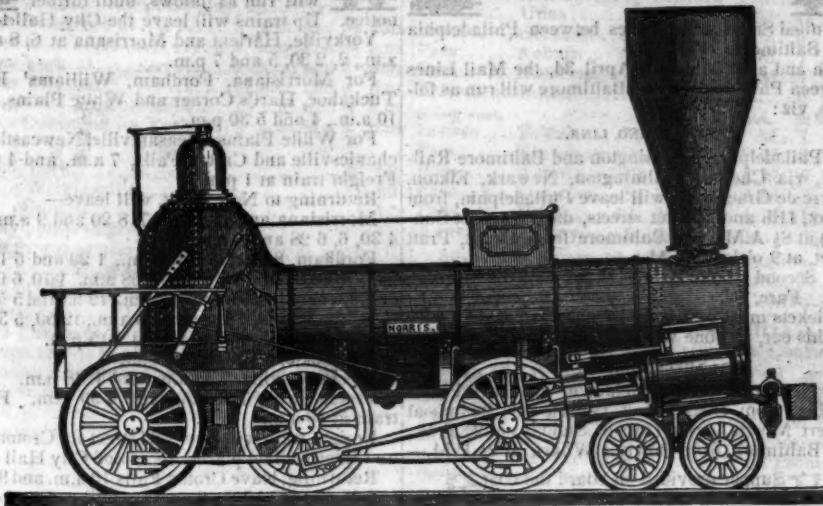
N. B.—The subscribers will dispose of single rights, or rights for one or more States, on reasonable terms.

Philadelphia, Pa., April 6, 1844.

The letters in the figures refer to the article given in the Journal of June, 1844.



NORRIS' LOCOMOTIVE WORKS. BUSHHILL, SCHUYLKILL SIXTH-ST., PHILADELPHIA.



THE UNDERSIGNED Manufacture to order Locomotive Steam Engines of any plan or size. Their shops being enlarged, and their arrangements considerably extended to facilitate the speedy execution of work in this branch, they can offer to Railway Companies unusual advantages for prompt delivery of Machinery of superior workmanship and finish.

Connected with the Locomotive business, they are also prepared to furnish, at short notice, Chilled Wheels for Cars of superior quality.

Iron and Brass castings, Axles, etc., fitted up complete with Trucks or otherwise.

NORRIS' BROTHERS.

MACHINE WORKS OF ROGERS, Ketchum & Grosvenor, Patterson, N. J. The undersigned receive orders for the following articles, manufactured by them of the most superior description in every particular. Their works being extensive and the number of hands employed being large, they are enabled to execute both large and small orders with promptness and despatch.

Railroad Work.

Locomotive steam engines and tenders; Driving and other locomotive wheels, axles, springs & flange tires; car wheels of cast iron, from a variety of patterns, and chills; car wheels of cast iron with wrought tires; axles of best American refined iron; springs; boxes and bolts for cars.

Cotton, Wool and Flax Machinery of all descriptions and of the most improved patterns, style and workmanship.

Mill gearing and Millwright work generally; hydraulic and other presses; press screws; callenders; lathes and tools of all kinds; iron and brass castings of all descriptions.

ROGERS, KETCHUM & GROSVENOR, Paterson, N. J., or 60 Wall street, N. York.

PIG AND BLOOM IRON.—THE SUBSCRIBERS are agents for the sale of numerous brands of Charcoal and Anthracite Pig Iron, suitable for Machinery, Railroad Wheels, Chains, Hollowware, etc. Also several brands of the best Puddling Iron, Juniata Blooms suitable for Wire, Boiler Plate, Axe Iron, Shovels, etc. The attention of those engaged in the manufacture of Iron is solicited by

A. WRIGHT & NEPHEW,
Vine St. Wharf, Philadelphia.

T. & C. WASON, Manufacturers of every style of Freight and Baggage Cars.—Forty rods east of the depot, Springfield, Mass.

Running parts in sets complete, Wheels, Axles, or any part of cars furnished and fitted up at short notice and in the best manner.

N.B. Particular attention paid to the manufacture of the most improved Freight Cars. We refer to the New Haven, Hartford and Springfield; Connecticut River; Harlem; Housatonic, and Western, Mass., Railroads, where our cars are now in constant use.

Dec. 25, 1847.—1y.

SPRING STEEL FOR LOCOMOTIVES, Tenders and Cars. The Subscriber is engaged in manufacturing Spring Steel from 1 1/2 to 6 inches in width, and of any thickness required: large quantities are yearly furnished for railroad purposes, and wherever used, its quality has been approved of. The establishment being large, can execute orders with great promptitude, at reasonable prices, and the quality warranted. Address

JOAN F. WINSLOW, Agent,
Albany Iron and Nail Works,

IMPORTANT TO ENGINEERS, CONTRACTORS, and Surveyors.—The Engineer's, Contractor's and Surveyor's Pocket Table Book, by J. M. Scribner, A. M., 264 pages, 24 mo; tuck binding, with gilt edge. Published by Huntington & Savage, 216 Pearl street, New York.

The above work comprises Logarithms of Numbers, Logarithmic Sines and Tangents, Natural Sines and Natural Tangents; the Traverse Table, and a full and extensive set of tables, exhibiting at one view the number of cubic yards contained in any embankment or cutting, and for any base or slope of sides usual in practice. Besides these essential tables, the work comprises 50 pages more of Mensuration, Tables, Weights of Iron, Strength of Materials, Formulas, Diagrams, etc., for laying out railroads, canals and curves; much of which has never before been offered to the public, and all dispensable to the engineer. This book will prove a great saving of time, and will enable the new beginner to furnish results as accurately (and with much greater rapidity) as the most experienced in the profession without its aid. The tables of Logarithms, etc., have been carefully corrected and compared with different editions of the same tables; and all the tables throughout the book have been read carefully by proofs four times; hence the most implicit confidence may be placed in their correctness.

Also, Scribner's Engineer's and Mechanic's Companion, new edition, 264 pages, enlarged, with 35 pages of entirely new matter, and much improved throughout.

It is believed these books are so well adapted to suit the above professions, that they cannot afford to do without them, and that they will aid in rewarding well directed mental labor.

Both are for sale by all the principal booksellers throughout the United States and Canada.

WESTERN RAILROAD.—ON AND AFTER Monday, April 5, 1847, the passenger

trains will leave daily, Sunday excepted, as follows:

Boston at 8 a. m. and 4 p. m. for Albany.
Albany at 7 1/4 a. m. and 5 p. m. for Boston.
Springfield at 8 1/2 a. m. and 1 p. m. for Albany.
Springfield at 8 1/2 a. m. and 1 1/2 and 3 p. m. (or on arrival of the train from New York) for Boston.
Day line to New York, via Springfield.—The steamboat train leaves Boston at 6 a. m. and arrives in New York at 7 p. m., by the steamboats Traveler, New York, or Champion. Returning, leaves New York at 6 1/4 a. m., and arrives in Boston at 7 p. m.

Night line to New York.—Leaves Boston at 11 p. m., and arrives in New York at 5 a. m. Albany and Troy.—Leave Boston at 8 a. m., Springfield at 1 p. m., and arrive in Albany at 6 p. m.; or, leave Boston at 4 p. m., Springfield next morning at 8 1/2 a. m., and arrive in Albany at 1 1/2 p. m.

The Troy trains connect at Greenbush.

The trains for Buffalo leave at 7 1/2 a. m. and 7 p. m. For Northampton, Greenfield, etc.—The trains of the Connecticut River Railroad leave Springfield at 9 1/4 a. m., 1 and 3 p. m., and passengers proceed directly on to Brattleboro', Windsor, Bellows Falls, Walpole, Hanover, Haverhill, etc.

For Hartford.—The trains leave Springfield on the arrival of the trains from Boston.

The trains of Pittsfield and North Adams Railroad leave Pittsfield on the arrival of the trains from Boston.

N.B.—No responsibility assumed for any baggage by the passenger trains, except for wearing apparel not exceeding the value of fifty dollars, unless by special agreement.

JAMES BARNES, Sup't and Eng'r.
C. A. SEAD, Agent, 27 State street, Boston.

GEORGIA RAILROAD. FROM AUGUSTA to ATLANTA—171 MILES.
AND WESTERN AND ATLANTIC RAILROAD FROM ATLANTA to DALTON, 100 MILES.

This Road in connection with the South Carolina Railroad and Western and Atlantic Railroad now forms a continuous line, 408 miles in length, from Charleston to Dalton (Cross Plains) in Murray county, Ga.—32 miles from Chattanooga, Tenn.

RATES OF FREIGHT.

	Between Augusta and Dalton.	Between Charleston and Dalton.
	271 miles.	408 miles.
1st class. Boxes of Hats, Bonnets, and Furniture, per cubic foot.....	\$0 18	\$0 28
2d class. Boxes and Bales of Dry Goods, Saddlery, Glass, Paints, Drugs and Confectionary, per 100 lbs.	1 00	1 50
3d class. Sugar, Coffee, Liquor, Bagging, Rope, Cotton Yarns, Tobacco, Leather, Hides, Copper, Tin, Feathers, Sheet Iron, Hollow Ware, Castings, Crockery, etc.	0 60	0 85
4th class. Flour, Rice, Bacon, Pork, Beef, Fish, Lard, Tallow, Beeswax, Bar Iron, Ginseng, Mill Gearing, Pig Iron, and Grindstones, etc.	0 40	0 65
Cotton, per 100 lbs.	0 45	0 70
Molasses, per hoghead.	8 50	13 50
" " barrel.....	2 50	4 25
Salt per bushel.....	0 18	
Salt per Liverpool sack..	0 65	
Ploughs, Corn Shellers, Cultivators, Straw Cutters, Wheelbarrows...	0 75	1 50

German or other emigrants, in lots of 20 or more, will be carried over the above roads at 2 cents per mile.

Goods consigned to S. C. Railroad Co. will be forwarded free of commissions. Freight payable at Dalton.

F. C. ARMS,
Sup't. of Transportation,
Augusta, Ga., July 15, 1847. 441v

THE WESTERN AND ATLANTIC Railroad.—This Road is now in operation to Oothcaloga, a distance of 80 miles, and connects daily (Sundays excepted) with the Georgia Railroad.

From Kingston, on this road, there is a tri-weekly line of stages, which leave on the arrival of the cars on Tuesday, Thursday and Saturday, for Warrenton, Huntsville, Decatur and Tusculumbia, Alabama, and Memphis, Tennessee.

On the same days, the stages leave Oothcaloga for Chattanooga, Jasper, Murfreesborough, Knoxville and Nashville, Tennessee.

This is the most expeditious route from the east to any of these places.

CHAS. F. M. GARNETT,
Chief Engineer.
Atlanta, Georgia, April 16th, 1846 1v1

CENTRAL RAILROAD-FROM SAVANNAH to Macon. Distance 190 miles.

This Road is open for the transportation of Passengers and Freight.

Rates of Passage, \$8 00. Freight—On weight goods generally... 50 cts. per hundred.

On measurement goods..... 13 cts. per cubic ft.

On bris. wet (except molasses and oil)..... \$1 50 per barrel.

On bris. dry (except lime).... 80 cts. per barrel.

On iron in pigs or bars, castings for mills, and unboxed machinery..... 40 cts. per hundred.

On hhd. and pipes of liquor, not over 120 gallons..... \$5 00 per hhd.

On molasses and oil..... \$6 00 per hhd.

Goods addressed to F. WINTER, Agent, forwarded free of commission.

THOMAS PURSE,
Gen'l. Sup't. Transportation.
July 40

PHILADELPHIA, WILMINGTON & BALTIMORE RAILROAD.—1848.

SUMMER ARRANGEMENT.

United States Mail Lines between Philadelphia and Baltimore. Fare, \$3.

On and after Monday, April 3d, the Mail Lines between Philadelphia and Baltimore will run as follows, viz:

MORNING LINE.

Per Philadelphia, Wilmington and Baltimore Railroad, via Chester, Wilmington, Newark, Elkton, Havre de Grace, etc., will leave Philadelphia, from Depot, 11th and Market streets, daily (except Sunday) at 8½ A.M., and Baltimore from Depot, Pratt street, at 9 o'clock, A.M.

A Second Class Car will be run with the morning line. Fare, \$2.

Tickets must positively be procured at the Office for this car, as none will be sold by the conductors.

AFTERNOON LINE.

Via Newcastle and Frenchtown, will leave Philadelphia, from Dock Street Wharf, per Steamboat Robert Morris, daily (except Sunday) at 2½ P.M., and Baltimore, from Bowly's Wharf, at 2½ P.M.—

Supper provided on board the boat.

NIGHT LINE.

Per Philadelphia, Wilmington and Baltimore Railroad, will leave Philadelphia, from depot, 11th and Market streets, daily, at 11 P.M., and Baltimore at 8 P.M.

WHEELING AND PITTSBURG.

Tickets through to Wheeling or Pittsburg, can be procured at the depot, or on board of the steamboat. Fare to Wheeling, \$13. Fare to Pittsburg, \$12.

The trains leave Baltimore for the west at 7 A.M. and 4 P.M.

SUNDAY MAIL LINE.

The only line for Baltimore on Sunday leaves the depot, 11th and Market streets, at 10 P.M.

Passengers for these lines must procure their Tickets at the office before taking their seats in the cars.

NOTICE.—All Baggage by these lines is at its owner's risk, and passengers are expressly prohibited taking anything as baggage, except their wearing apparel. 50 lbs. baggage allowed each passenger.

WILMINGTON ACCOMMODATION TRAINS.

On and after Monday, April 3d, the Accommodation Trains, stopping at all the intermediate places between Philadelphia and Wilmington, will leave as follows, viz:

Leave Philadelphia, from depot 11th and Market streets, daily (Sundays excepted) at 1½ and 4 P.M. Leave Wilmington, from the depot, Water street, daily (except Sunday) at 7½ A.M. and 4½ P.M.

The Freight Accommodation Train will leave Philadelphia at 7 P.M. and Wilmington at 7 P.M.

The Mail Trains stopping at Chester and Wilmington, leave Philadelphia at 8½ A.M. and 10 P.M. Wilmington at 1 o'clock, P.M., and 12 midnight. Fare to Wilmington, 50 cts. Fare to Chester, 25 cts.

G. H. HUDDALL, Agent.

March 23, 1848.

1y15

BOSTON AND PROVIDENCE RAILROAD. On and after Monday, October 2d, the

Trains will run as follows:

Steamboat Train—Leaves Boston at 5 p.m.—Leaves Providence, on the arrival of the train from Stonington.

Accommodation Trains—Leave Boston at 8 a.m. and 3½ p.m. Leave Providence at 8½ a.m. and 3½ p.m.

Dedham Trains—Leave Boston at 9 a.m., 12 m., 3, 6, and 10½ p.m. Leave Dedham at 7½ 10½ a.m., 1½, 4½, and 9 p.m.

Stoughton Trains—Leave Boston at 11½ a.m. and 4½ p.m. Leave Stoughton at 8½ a.m. and 2½ p.m.

Freight Trains—Leave Boston at 11 a.m. and 6 p.m. Leave Providence at 4 a.m. and 7 40 a.m.

On and after Wednesday, Nov. 1, the DEDHAM TRAIN will run as follows: Leave Boston at 9 a.m., 12 m., 3, 5½ and 10½ p.m. Leave Dedham at 8 10½ a.m., 1½, 4½ and 9 p.m.

WM. RAYMOND LEE, Sup't.

NEW YORK & HARLEM RAILROAD CO.—Summer Arrangement.—On and after

Tuesday, June 1st, 1847, the cars

will run as follows, until further notice. Up trains will leave the City Hall for—

Yorkville, Harlem and Morrisana at 6, 8 and 11 a.m., 2, 2 30, 5 and 7 p.m.

For Morrisiana, Fordham, Williams' Bridge, Tuckahoe, Hart's Corner and White Plains, 7 and 10 a.m., 4 and 5 30 p.m.

For White Plains, Pleasantville, Newcastle, Mechanicsville and Croton Falls, 7 a.m. and 4 p.m.—Freight train at 1 p.m.

Returning to New York, will leave—Morrisiana and Harlem, 7, 8 20 and 9 a.m., 1, 3, 4 30, 6, 6 28 and 8 p.m.

Fordham, 8 08 and 9 15 a.m., 1 20 and 6 15 p.m.

Williams Bridge, 8 and 9 08 a.m., 1 10, 6 08 p.m.

Tuckahoe, 7 38 and 8 25 a.m., 12 55 and 5 52 p.m.

White Plains, 7 10 and 8 35 a.m., 12 50, 5 35 p.m.

Pleasantville, 8 15 a.m. and 5 15 p.m.

Newcastle, 8 a.m. and 5 p.m.

Mechanicsville, 7 48 a.m. and 4. 48 p.m.

Croton Falls, 7 30 a.m. and 4 30 p.m. Freight train at 10 a.m.

Freight train will leave 32d street for Croton Falls and intermediate places, 4 a.m. and City Hall 1 p.m.

Returning, leave Croton Falls 10 a.m. and 9½ p.m.

ON SUNDAYS, the trains will run as follows: Leave City Hall for Croton Falls, 7 a.m. 4 p.m.

Croton Falls for City Hall, 7 30 a.m., 4 30 p.m.

Leave City Hall for White Plains and intermediate places, 7 and 10 a.m. 4 and 5 30 p.m.

White Plains for City Hall, 7 10 and 8 35 a.m., 12 30 and 5 35 p.m.

Extra trains will be run to Harlem, Fordham and Williams Bridge on Sunday, when the weather is fine.

The trains to and from Croton Falls will not stop on N. York island, except at Broome st. and 32d st.

A car will precede each train 10 minutes to take up passengers in the city.

Fare from New York to Croton Falls and Somers \$1, to Mechanicsville 87½c, to Newcastle 75c, to Pleasantville 62½c, to White Plains 50c.

25f

BOSTON AND MAINE RAILROAD. Upper Route, to Portland and the East.

Summer Arrangement.

Commencing July 3d, 1848.

Trains leave Boston as follows, viz:

For Portland at 7 A.M. and 2½ P.M.

For Great Falls at 7 a.m., 2½ and 4½ p.m.

For Haverhill at 7 and 11½ a.m., 2½, 4½ and 6 p.m.

For Lawrence, at 7, 9, 11½ a.m., 2½, 4½, 6, 7 p.m.

For Reading 7, 9 & 11½ a.m., 2½, 4½, 6, 7, 8½ & 10 p.m.

Trains leave for Boston as follows, viz:

From Portland at 7½ a.m., and 3 p.m.

From Great Falls at 6½ and 9½ a.m., and 4½ p.m.

From Haverhill at 7, 8½ and 11 a.m., 3½ and 6½ p.m.

Lawrence at 6½, 7½, 8½, 11½ a.m., 12½, 3½, 6½, p.m.

Reading at 6, 6½, 7½, 9½, 11½ a.m., 1, 4, 7½, 9, 10 p.m.

MEDFORD BRANCH TRAINS.

From Boston at 6-50, 9½ a.m., 12½ 2½, 5½, 7, 10 p.m.

From Medford at 6-10, 7½, 10½ a.m., 2, 4, 6½, 9½ p.m.

STEAMBOAT TRAINS.

For BANGOR, every Monday, Wednesday and Friday, at 5 p.m.

For HALLOWELL, every Tuesday, Thursday & Saturday, at 7 a.m.

The Depot in Boston is on Haymarket Square.

CHAS. MINOT, Super't.

Boston, July 3d, 1848.

PHILADELPHIA AND READING RAILROAD.—Passenger Train Arrangement for

1848.

A Passenger Train will leave Philadelphia and Pottsville daily, except Sundays, at 9 o'clock A.M.

The Train from Philadelphia arrives at Reading at 12 18 M.

The Train from Pottsville arrives at Reading at 10 43 A.M.

Fares. Miles. No. 1. No. 2.

Between Phila. and Pottsville, 92 \$3-50 and \$3-00

" " Reading, 58 2-25 and 1-90

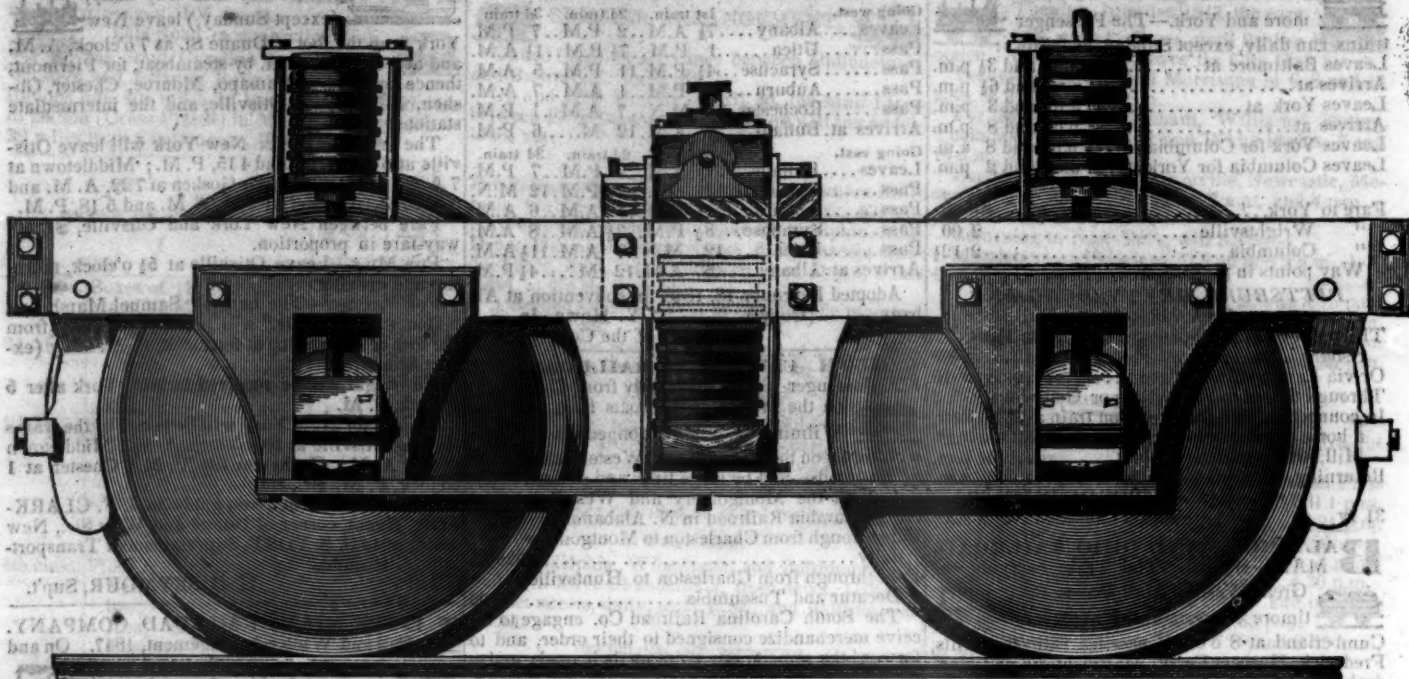
" " Pottsville " 34 1-40 and 1-20

Five minutes allowed at Reading; and three at other way stations.

Passenger Depot in Philadelphia corner of Broad and Vine streets.

8f

VULCANIZED INDIA RUBBER CAR SPRINGS.



THE NEW ENGLAND CAR COMPANY have introduced these Springs, and they are now in operation on every Railroad terminating in Boston, and several others in New England and the Middle States. Their qualities are well understood, or may be readily ascertained by every person interested to know them. They require no recommendation from the Company. The only known compound of India Rubber good for anything for this purpose is the Vulcanized India Rubber, invented by Charles Goodyear, of New Haven, and the application of it, and the form in which it is used, were invented by F. M. Ray, of New York. The right to manufacture and sell the substance itself for the purpose of Railroad Carriage Springs, as well as the form and application of it, are held exclusively by the New England Car Company. No other company, or individual, has any right to sell or use it for such purpose, or has attempted so to use it in this country.

The New England Car Company guarantee the right to use the article they sell for Railroad Carriage Springs only, against all adverse rights, whether under patents or otherwise; and all persons and corporations are cautioned against a similar use of the article, when purchased of any other parties.

The Springs they sell are all manufactured in a uniform manner, and under the immediate inspection of their own Agent, and have been proved and known to answer the purpose. None have been manufactured in this country or imported from abroad beside their own, which would at all answer the purpose; and if any such should be produced, it cannot be used for Car Springs, while Goodyear's patents, and the rights of the New England Car Company under them, remain in force.

The New England Car Company are now prepared to answer orders for all that may be called for, on reasonable notice, and uniform and equitable terms. They invite the most careful examination, and the severest scrutiny, into the merits of their Springs, wherever they have applied them. And if after such examination, your Company should judge it for their interest to adopt them, the N. E. Car Company would respectfully invite the patronage which they think they deserve, and are confident of receiving at your hands.

EDWARD CRANE, Agent,
Office 99 State street.

Orders may also be left with **WM. RIDER & BROTHERS**, No. 58 Liberty street, New York, or with **F. M. RAY, Agent,**
100 Broadway, N. Y.

The following article, from the pen of Mr. HALE, the president of the Boston and Worcester railroad, expresses his opinion of this important improvement, as published in the Boston Daily Advertiser of June 7, 1848. He says:

"Of the numerous uses to which the wonderful elasticity and durability of India Rubber renders this material applicable, we are hardly aware of one in which it has been more successful than in forming springs for railroad cars. We have had occasion to observe, for some months past, its application to this use, on one of the passenger cars on the New-England special train of the Boston and Worcester railroad. It is there used, not only for the springs on which the car rests, but for the springs attached to the draw bar at each end of the car, to prevent any jar on the sudden advancement or interruption of the motion of the car. For both these purposes it appears to be admirably adapted, and we do not learn, that during the period in which it has been used, any defect in it has been discovered. It renders the movements of the car extremely easy, and protects it more effectually, we think, than any other spring which we have ever seen in use, from every harsh or unpleasant motion, either vertical or horizontal. It is simple in its form and application, extremely light, and little liable to get out of repair. During the period of some months, in which we have seen the springs in operation, there is no apparent wear or diminution of their efficiency."

The above statement of Mr. Hale agrees with my own observation in all particulars.

WM. PARKER, Supt. B. & W. R. R.
June 8, 1848.

I fully concur in the foregoing statement, from practical observation of its use for the last 5 months, on the Boston and Worcester railroad corporation cars.

D. N. PICKERING, Jr.,
Supt. Car Building B. & W. R. R.

Boston, June 10, 1848.

The New England Car Company have introduced their Vulcanized India Rubber Car Springs on the roads with which we are respectively connected, and we fully concur with Mr. Hale in the above opinion of their character and properties.

DAVENPORT & BRIDGES, Car Builders.
BRADLEY & RICE, Car Builders.

Boston, June, 1848.

LAP-WELDED WROUGHT IRON TUBES for Tubular Boilers, from 14 to 15 inches diameter, and any length not exceeding 17 feet—manufactured by the Caledonian Tube Company, Glasgow, and for sale by

IRVING VAN WART,
12 Platt street, New York.
JOB CUTLER, Patentee.

These Tubes are extensively used by the British Government, and by the principal Engineers and Steam Marine and Railway Companies in the Kingdom.

AMERICAN RAILROAD JOURNAL.

OFFICE AT 48 SOUTH THIRD STREET,
(Below Chestnut Street.)
PHILADELPHIA, PA.

This is the only periodical having a general circulation throughout the Union, in which all matters connected with public works can be brought to the notice of all persons in any way interested in these undertakings. Hence it offers peculiar advantages for advertising times of departure, rates of fare and freight, improvements in machinery, materials, as iron, timber, stone, cement, etc. It is also the best medium for advertising contracts, and placing the merits of new undertakings fairly before the public.

TERMS.—Five Dollars a year, in advance.

RATES OF ADVERTISING.

One page per annum.....	\$125 00
One column ".....	50 00
One square ".....	15 00
One page per month.....	20 00
One column ".....	8 00
One square ".....	2 50
One page, single insertion.....	8 00
One column ".....	3 00
One square ".....	1 00
Professional notices per annum.....	5

LETTERS and COMMUNICATIONS for this Journal may be directed to the Editor,

D. K. MINOR.